BTK AKADEMİ

ZAFER CÖMERT
Öğretim Üyesi

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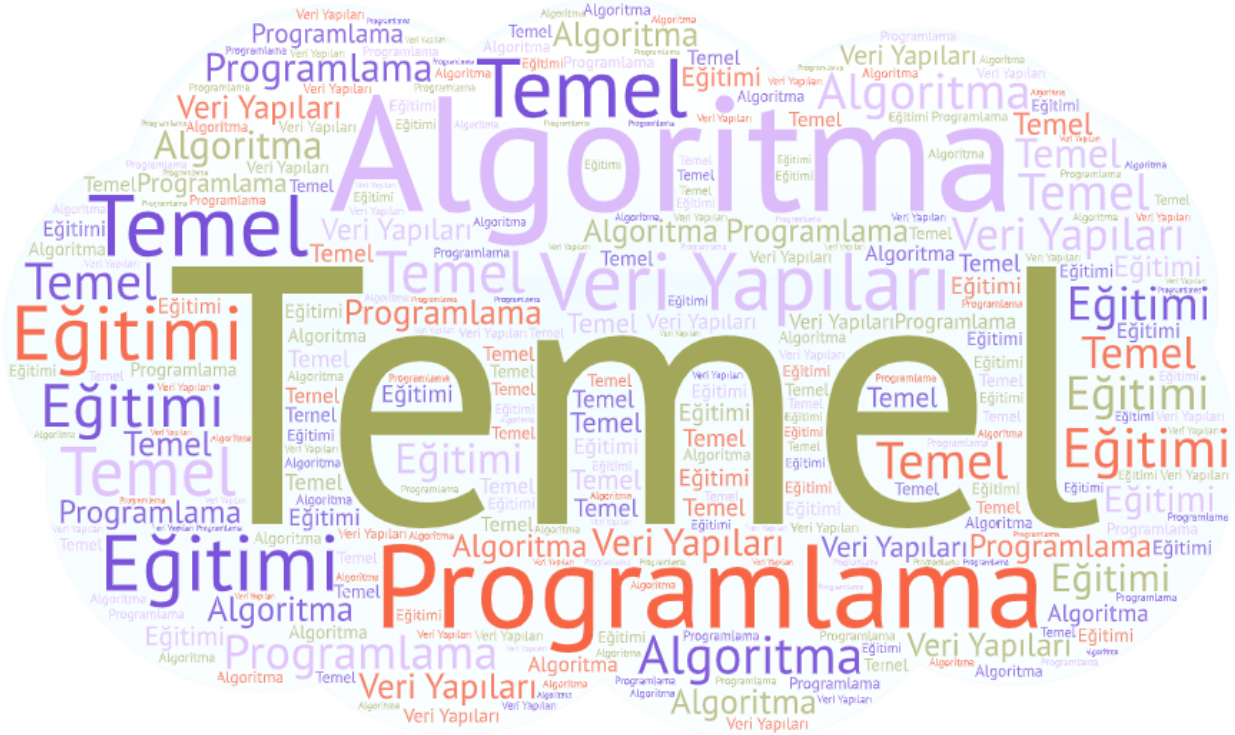
comertzafer@gmail.com




# Çevrimler (Döngüler)

# Çevrimler

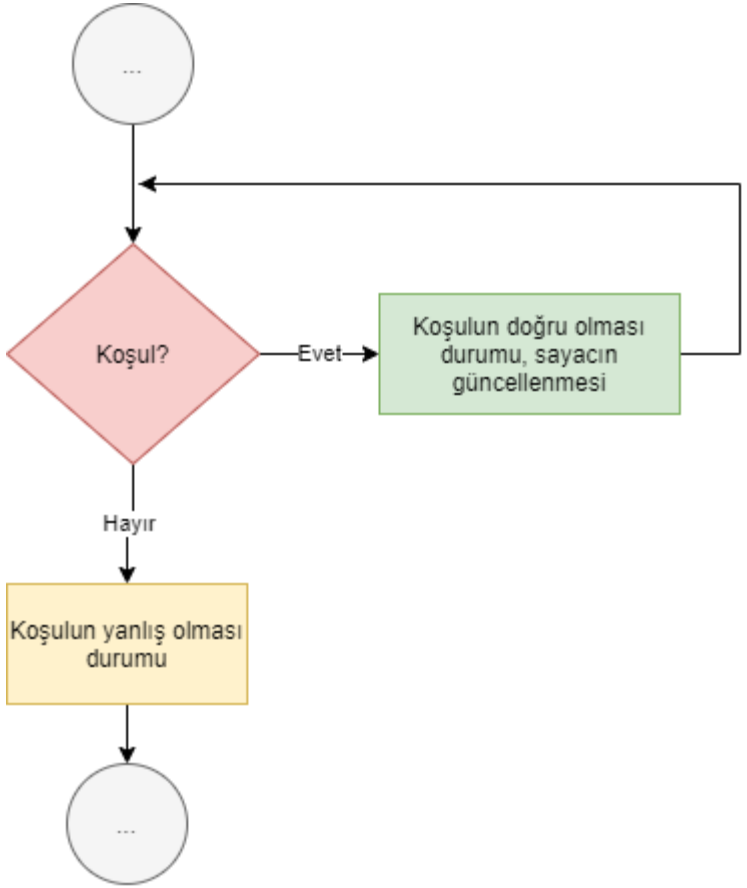
- Bir kod bloğunu birkaç kez çalıştırmanız gereken bir durum olabilir.

- Genel olarak, ifadeler sırayla yürütülür: Bir fonksiyondaki ilk ifade önce çalıştırılır, ardından ikincisi yapılır ve bu böyle devam eder.

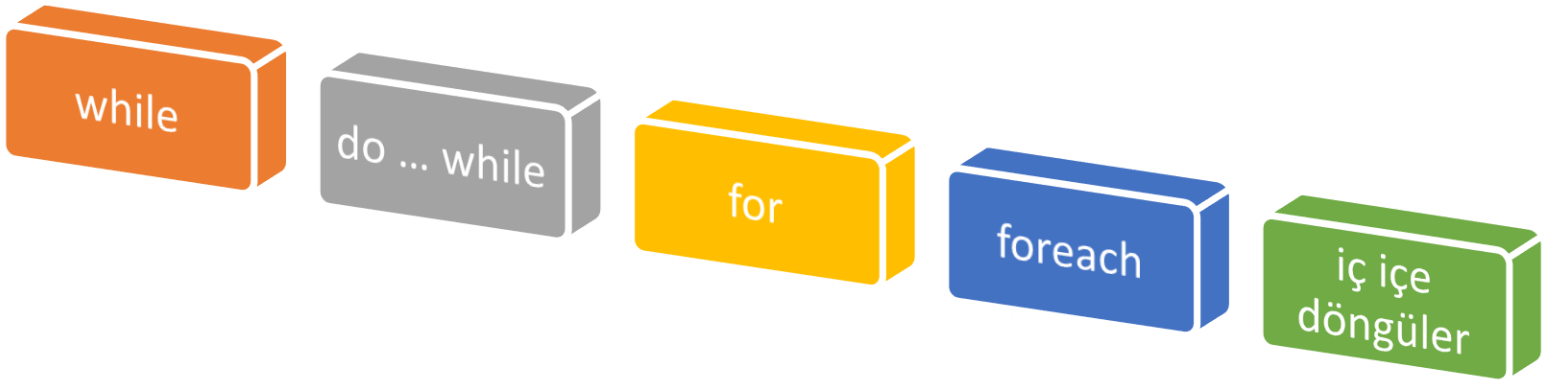
- Programlama dilleri, daha karmaşık yürütme yollarına izin veren çeşitli kontrol yapıları sağlar.

# Çevrimler

- Bir döngü ifadesi, bir ifadeyi veya bir grup ifadeyi birden çok kez yürütmemize izin verir ve aşağıdaki şekil programlama dillerinin çoğunda bir döngü ifadesinin genelidir.

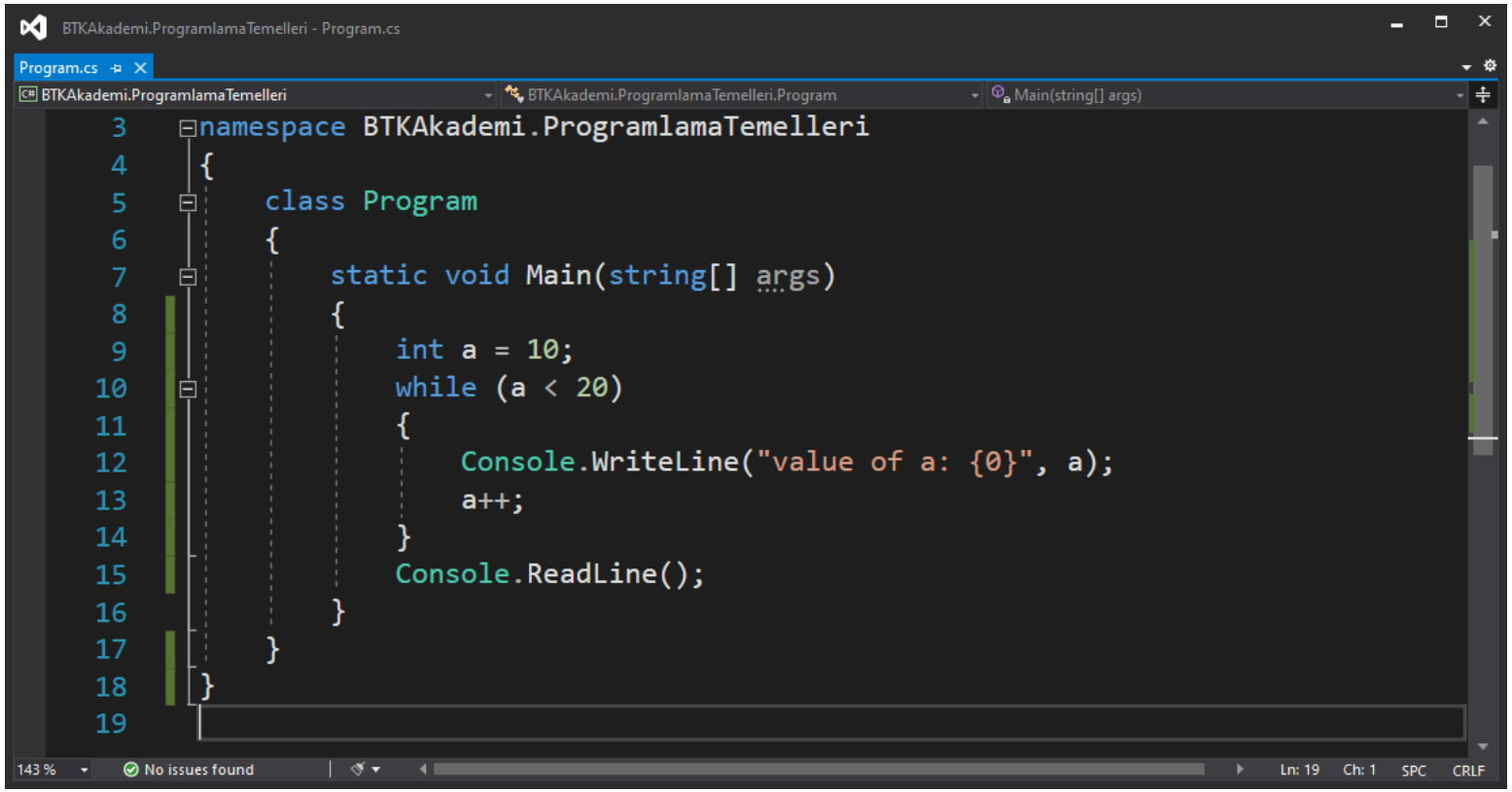


# Çevrimler



# while

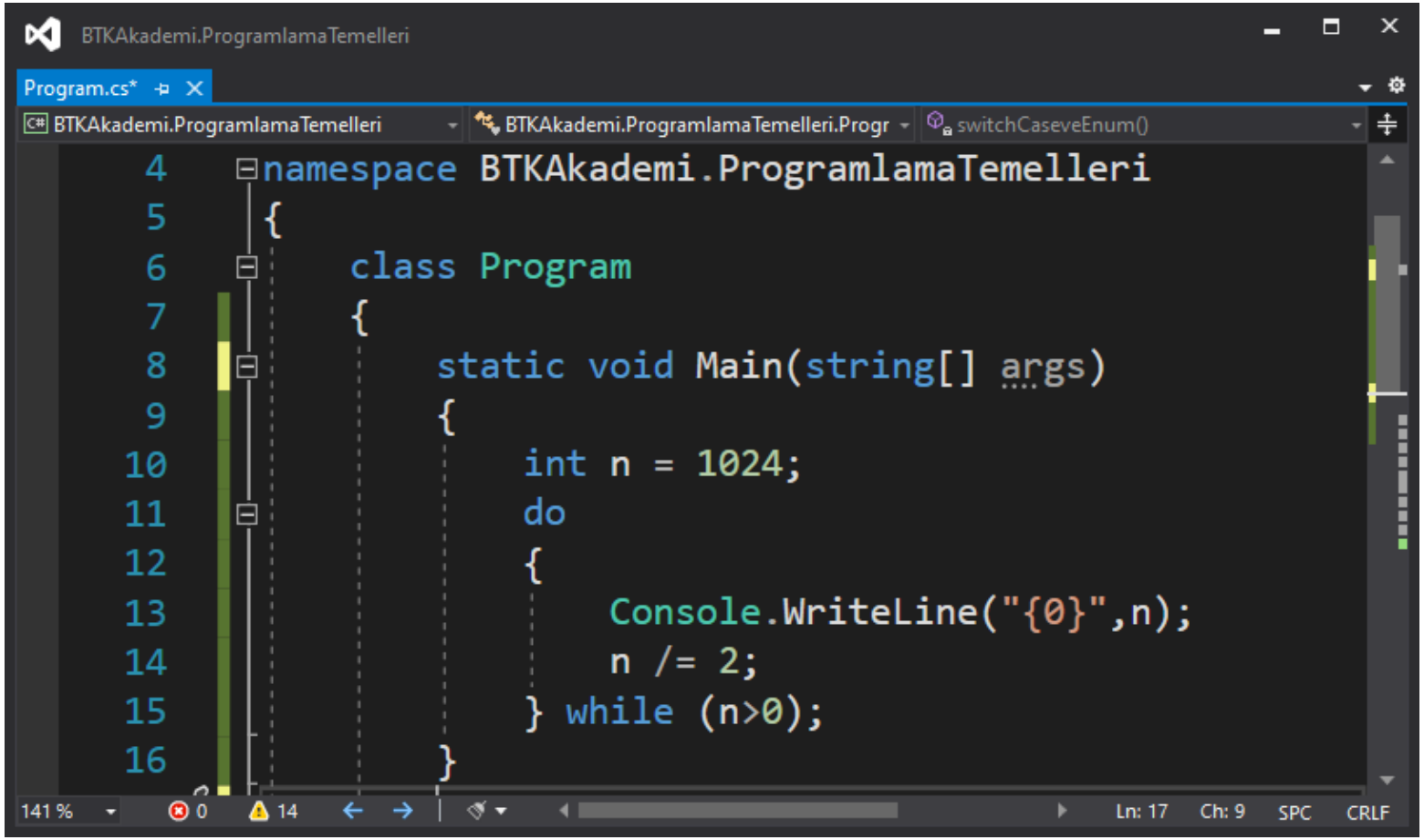
- C# içindeki bir **while** döngüsü ifadesi, belirli bir koşul doğru olduğu sürece bir hedef ifadeyi tekrar tekrar yürütür.



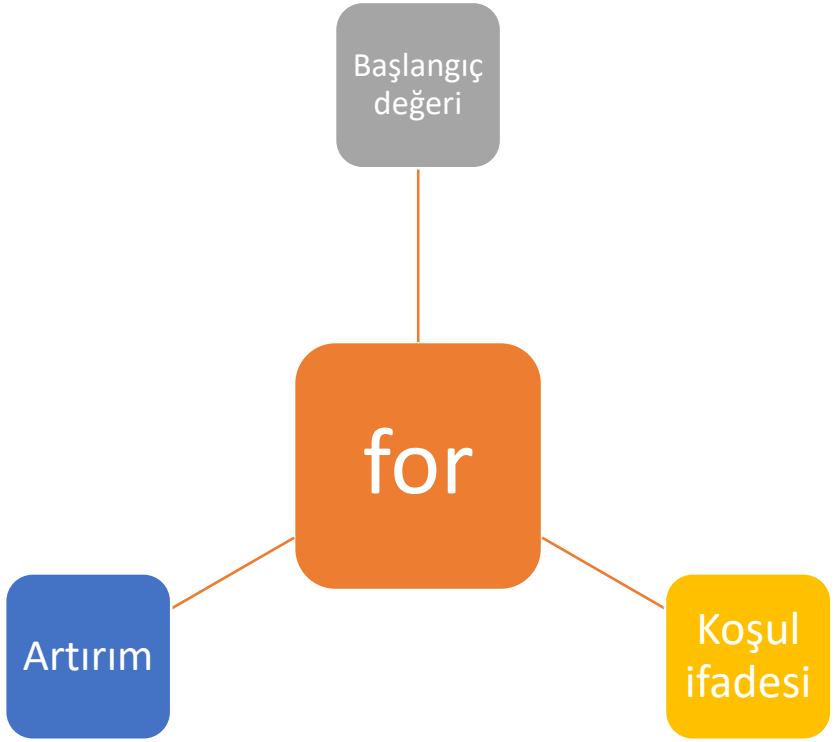
# do … while

- Bu yapıda öncelikle koşula bakılmaksızın döngü içerisine girilir.
- Döngü içerisindeki kod bloğu bir kez çalıştırılır.
- Daha sonra koşul ifadesinin sağlanması durumunda ilgili kod bloğu çalışmaya devam eder; aksi durumda döngünde çıkılır.

# do … while


BTKAkademi.ProgramlamaTemelleri
Program.cs*
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Progr
switchCaseveEnum()
4 namespace BTKAkademi.ProgramlamaTemelleri
5 {
6 class Program
7 {
8 static void Main(string[] args)
9 {
10 int n = 1024;
11 do
12 {
13 Console.WriteLine("{0}",n);
14 n /= 2;
15 } while (n>0);
16 }
141 %
0
14
Ln: 17
Ch: 9
SPC
CRLF

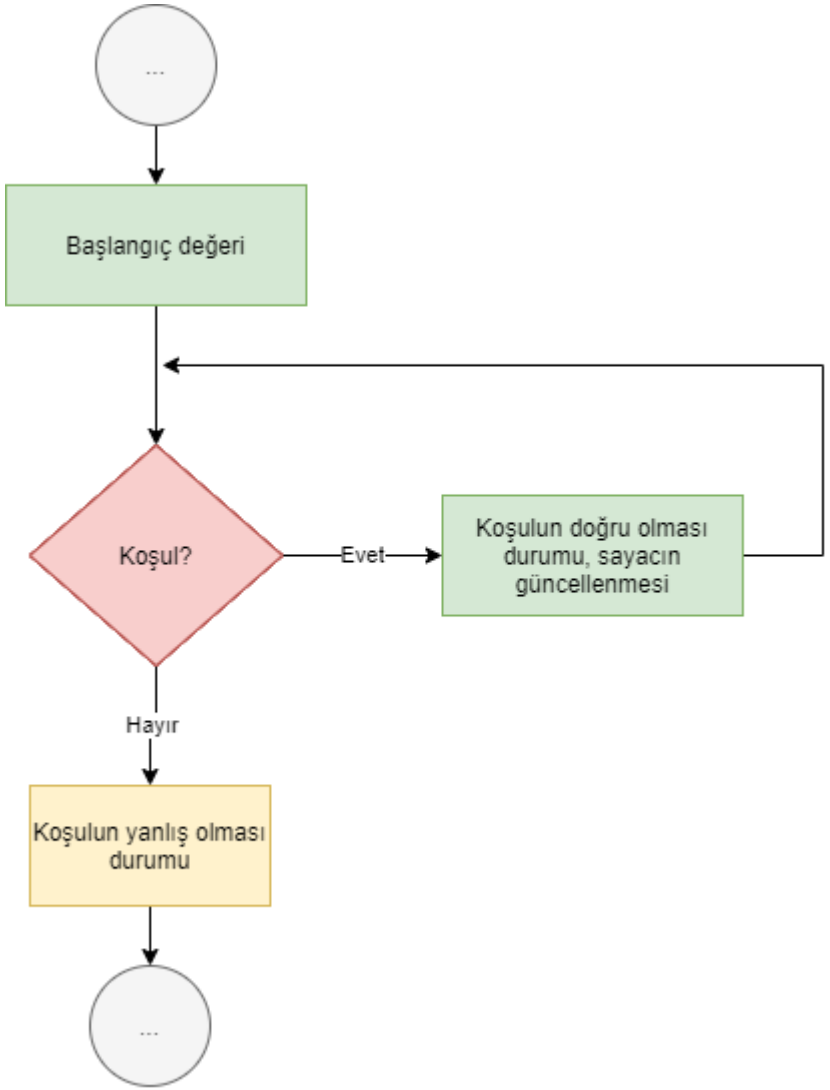
# for döngüsü



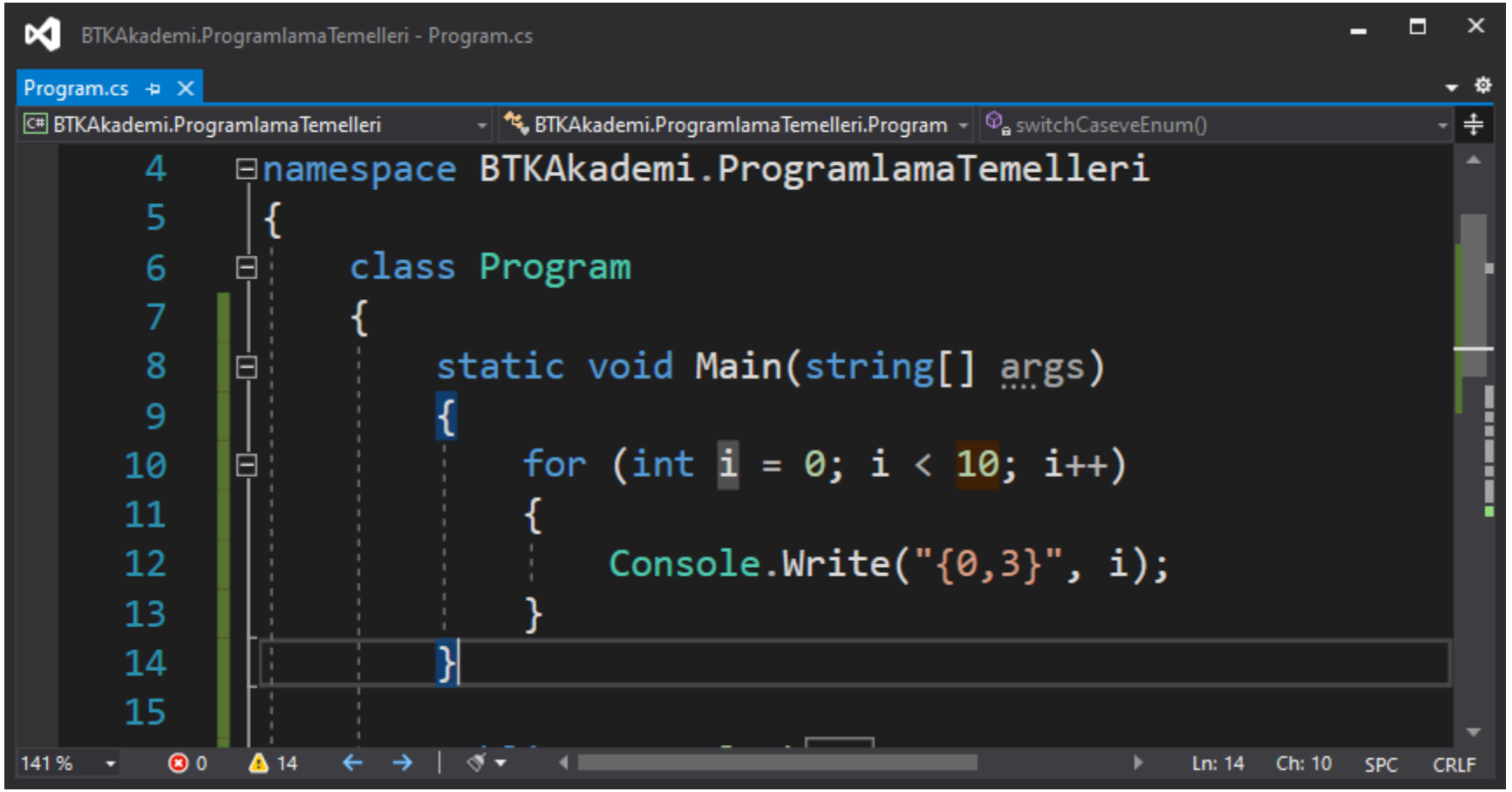

- Bir **for** döngüsü, belirli sayıda kez çalıştırılması gereken bir döngüyü verimli bir şekilde yazmanıza olanak tanıyan bir tekrar kontrol yapısıdır.

# for döngüsü

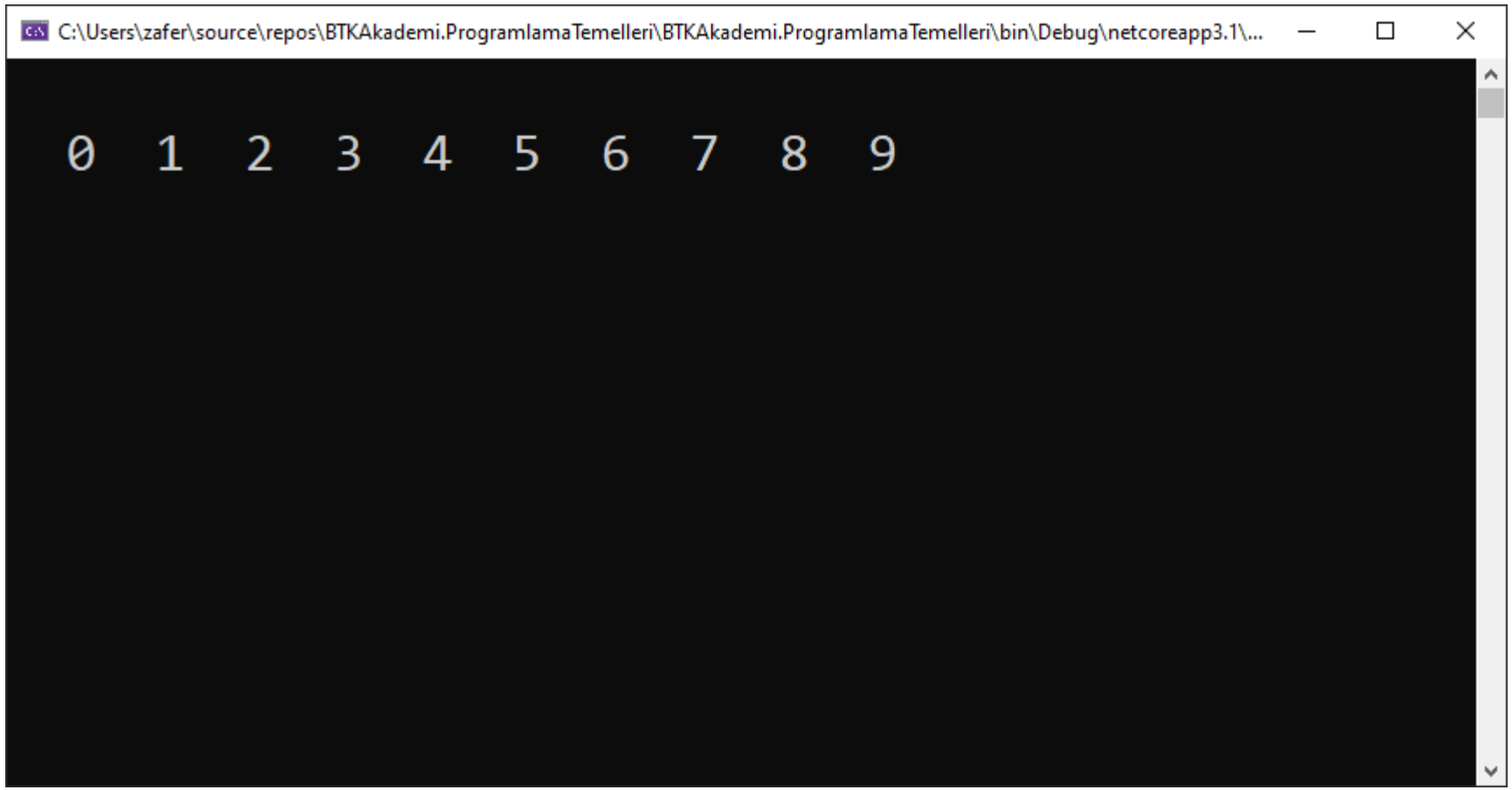
- En yaygın şekilde kullanılan döngü yapılarından biridir.



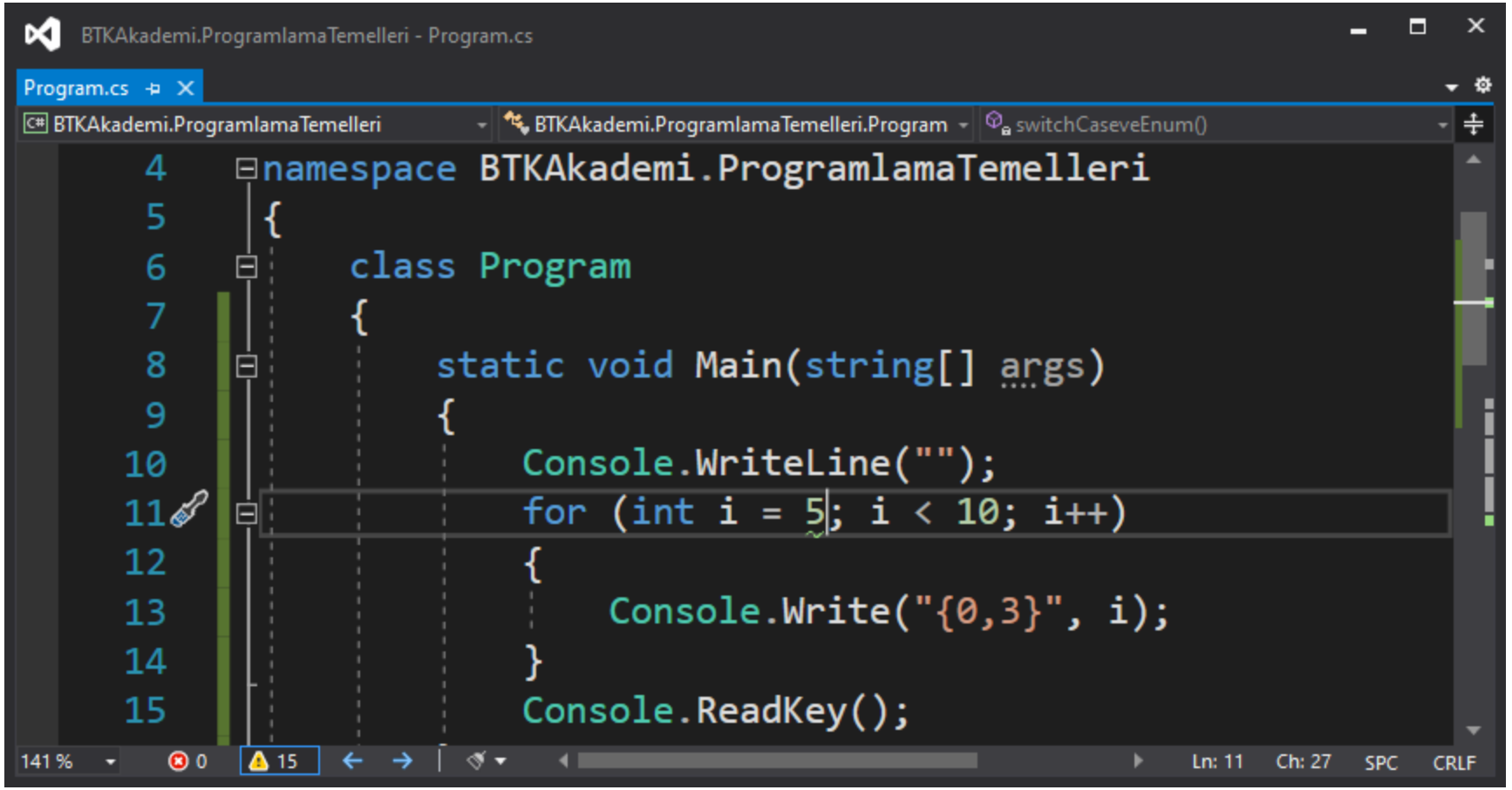
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
switchCaseveEnum()
4 namespace BTKAkademi.ProgramlamaTemelleri
5 {
6 class Program
7 {
8 static void Main(string[] args)
9 {
10 for (int i = 0; i < 10; i++)
11 {
12 Console.Write("{0,3}", i);
13 }
14 }
15
141 %
0
14
Ln: 14
Ch: 10
SPC
CRLF

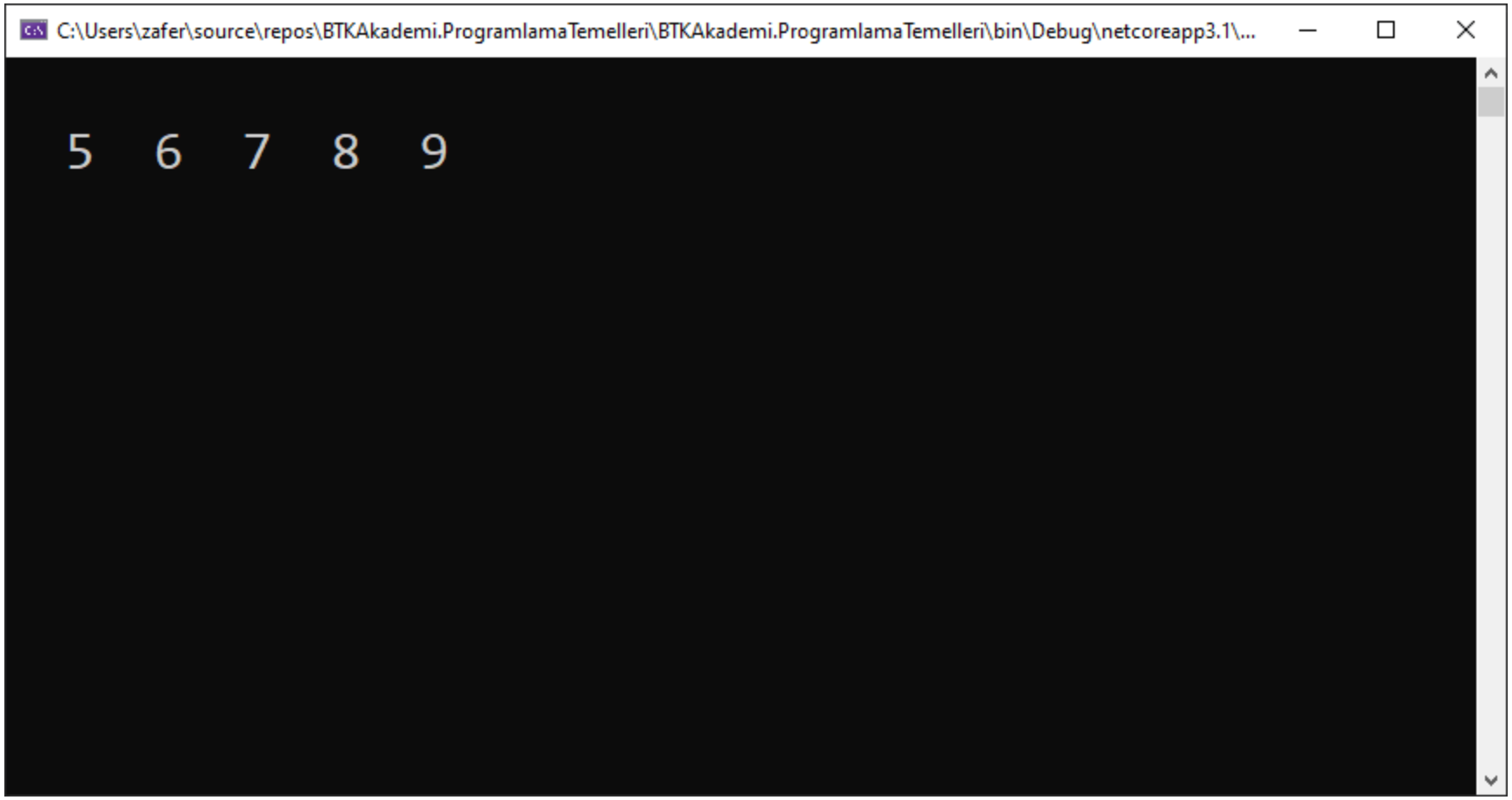
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\...
0 1 2 3 4 5 6 7 8 9

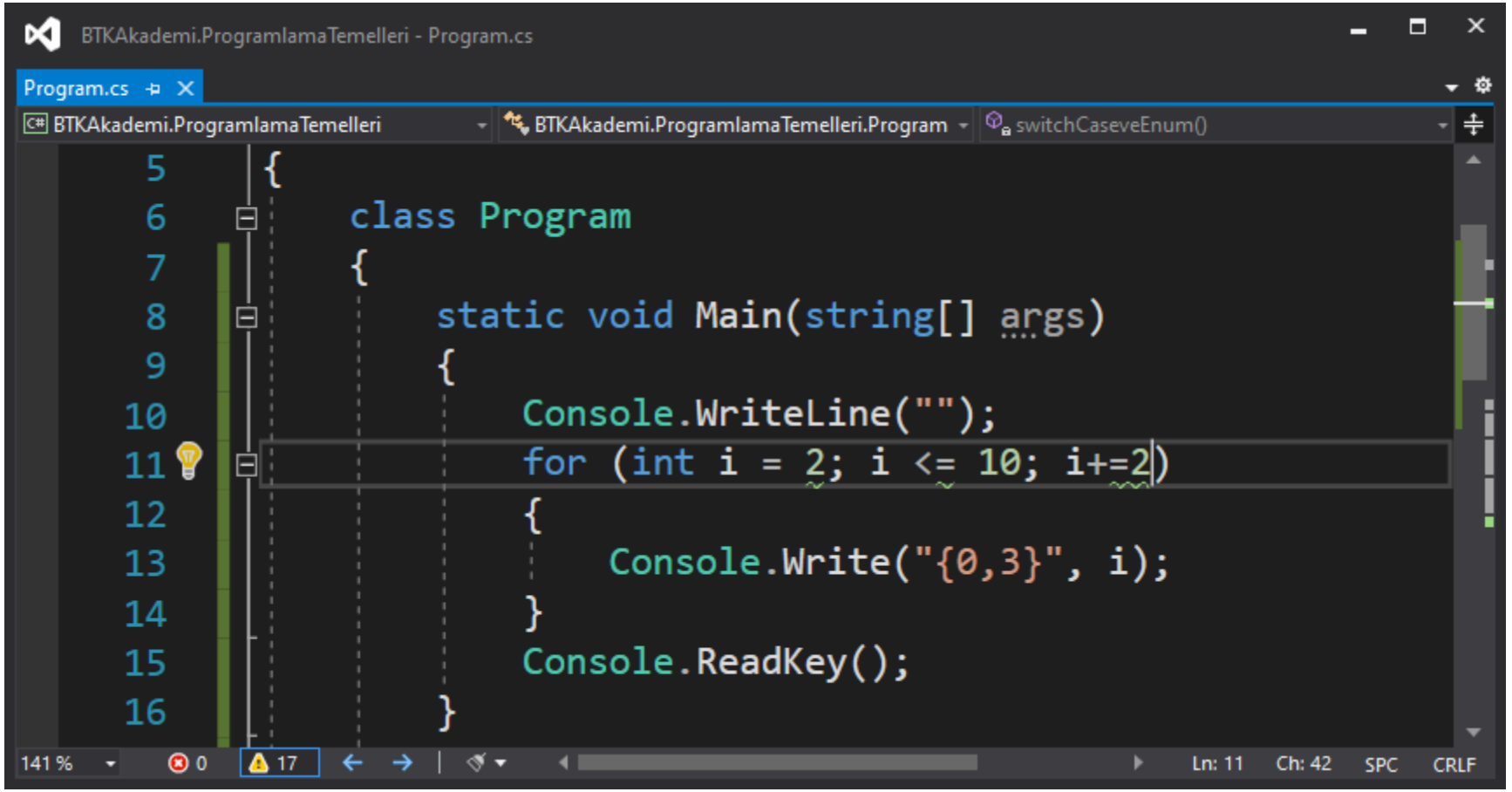
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
switchCaseveEnum()
namespace BTKAkademi.ProgramlamaTemelleri
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 5; i < 10; i++)
{
Console.Write("{0,3}", i);
}
Console.ReadKey();
141 %
0
15
Ln: 11
Ch: 27
SPC
CRLF

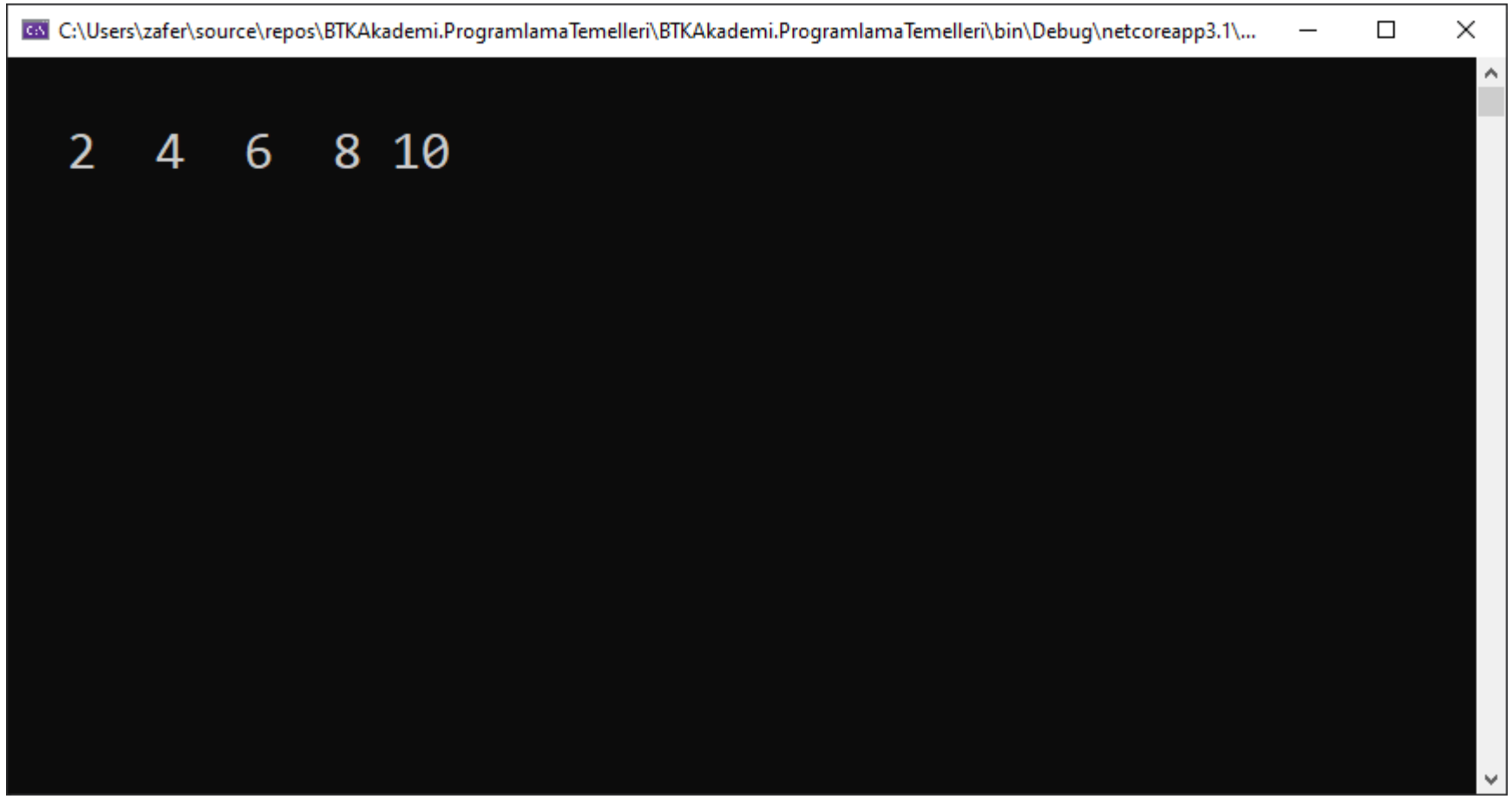
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\...
5 6 7 8 9

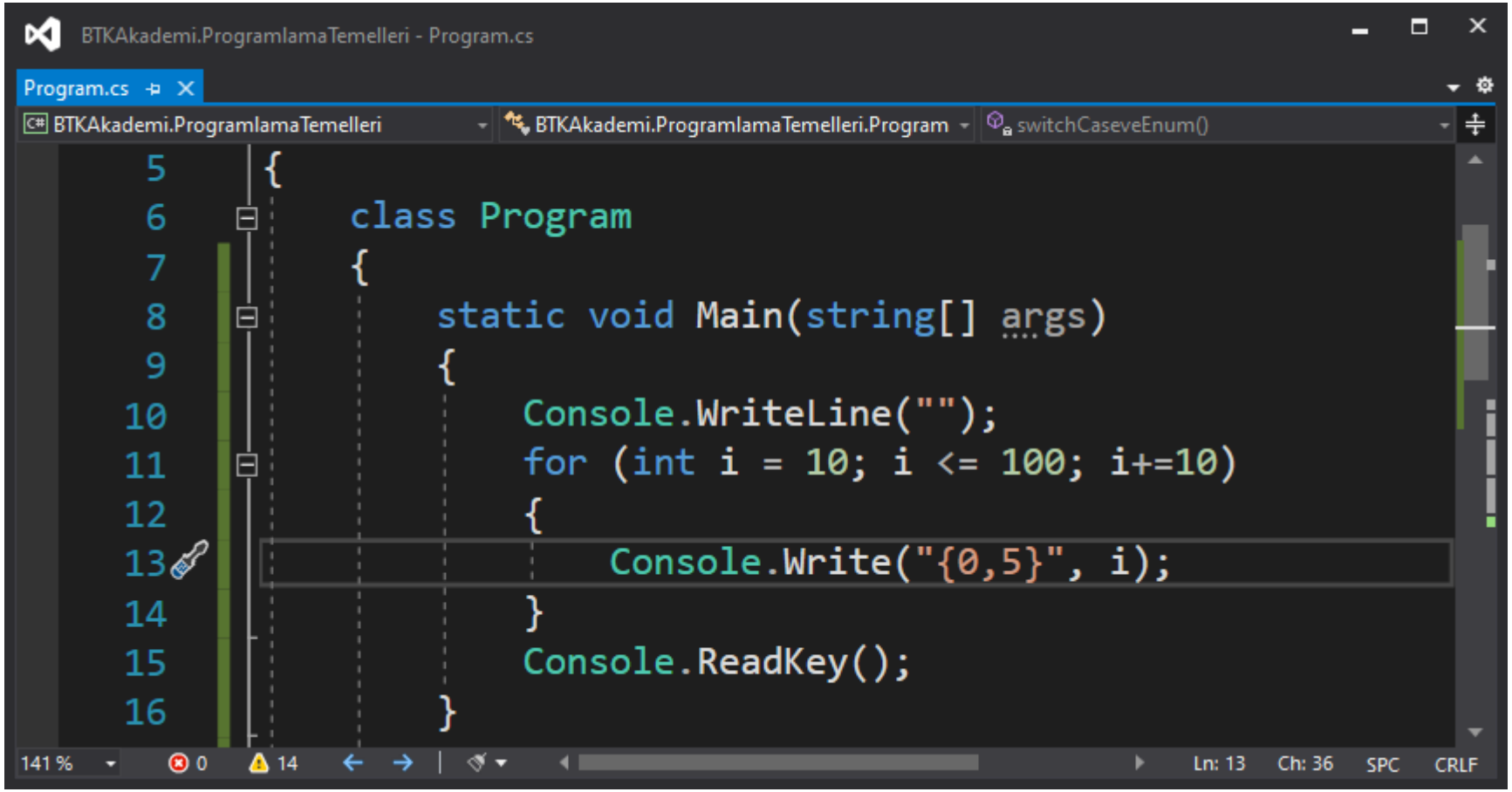
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
switchCaseveEnum()
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 2; i <= 10; i+=2)
{
Console.Write("{0,3}", i);
}
Console.ReadKey();
}
141 %
0
17
Ln: 11
Ch: 42
SPC
CRLF

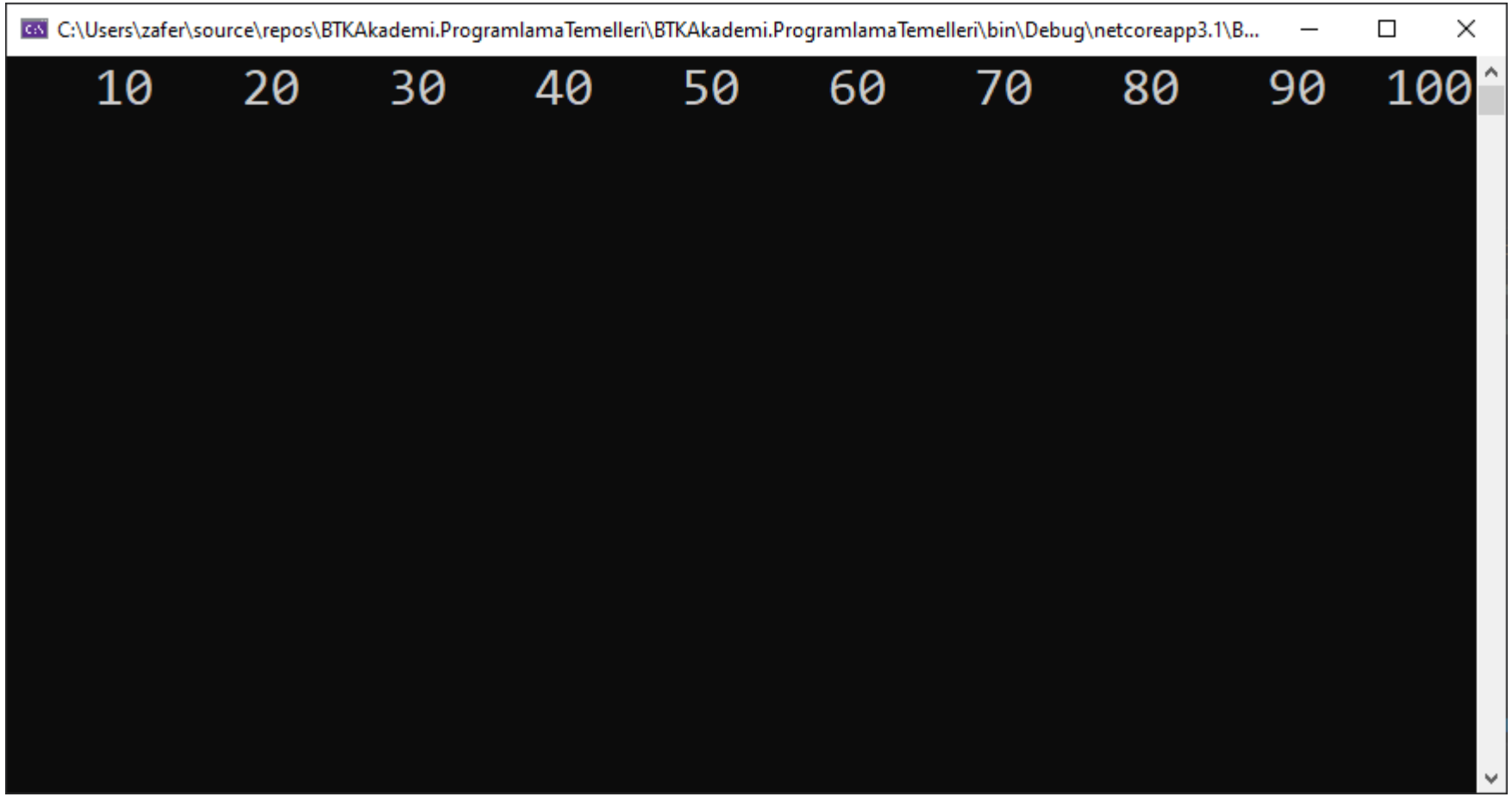
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\...
2 4 6 8 10

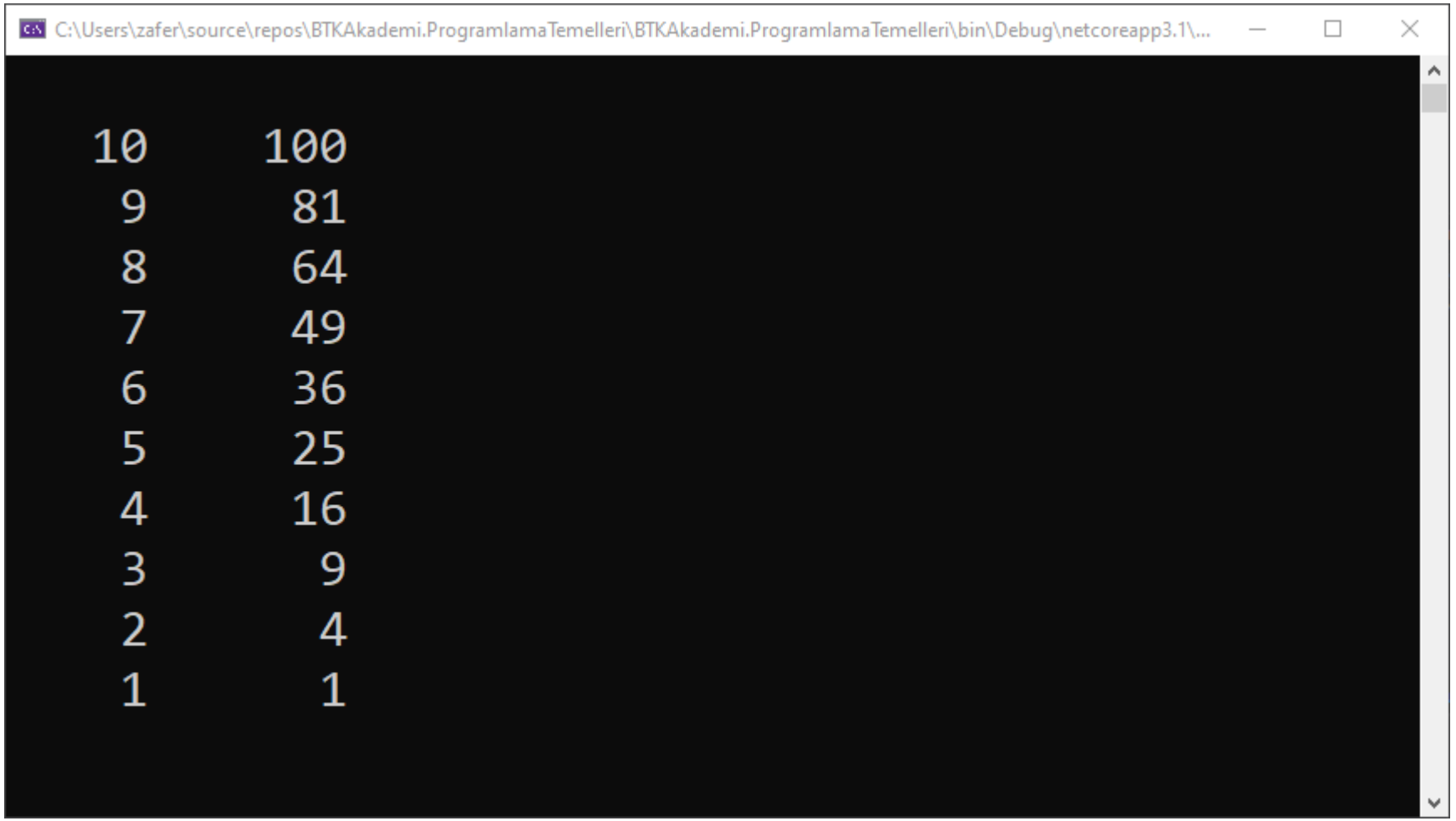
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
switchCaseveEnum()
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 10; i <= 100; i+=10)
{
Console.Write("{0,5}", i);
}
Console.ReadKey();
}
141 %
0
14
Ln: 13
Ch: 36
SPC
CRLF

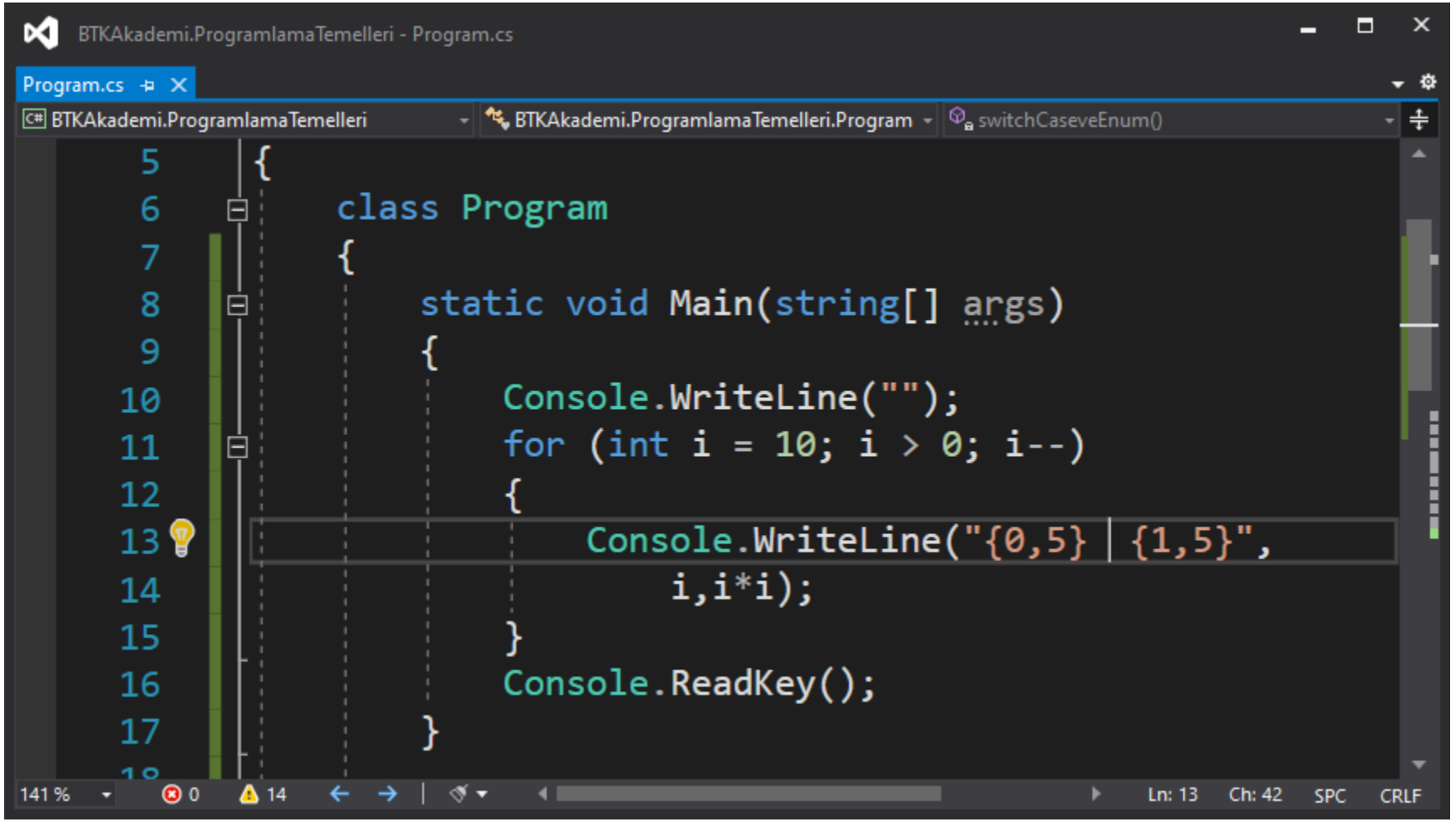
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\B...
10 20 30 40 50 60 70 80 90 100

# for döngüsü (?)


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\...
10 100
9 81
8 64
7 49
6 36
5 25
4 16
3 9
2 4
1 1

# for döngüsü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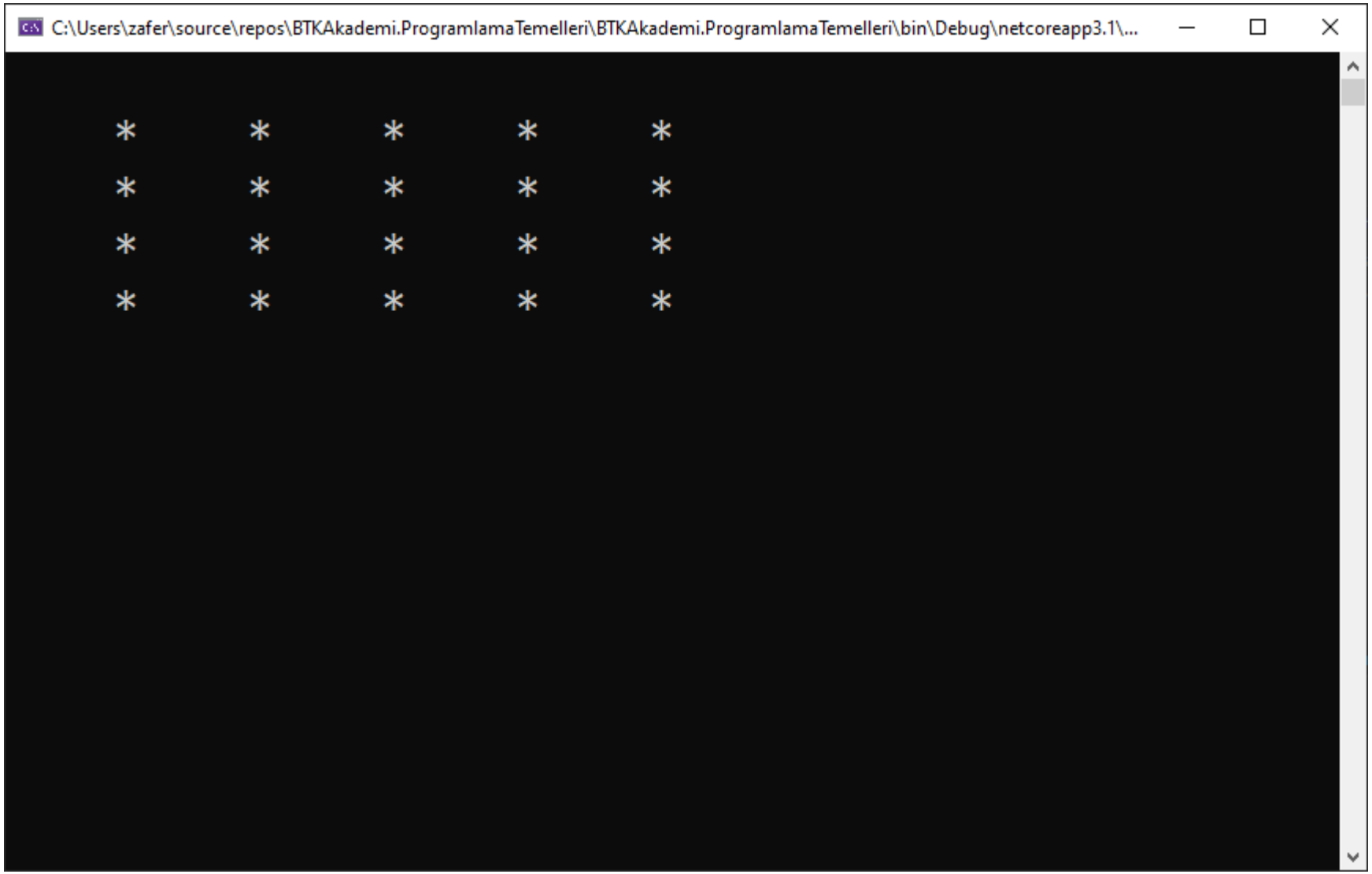
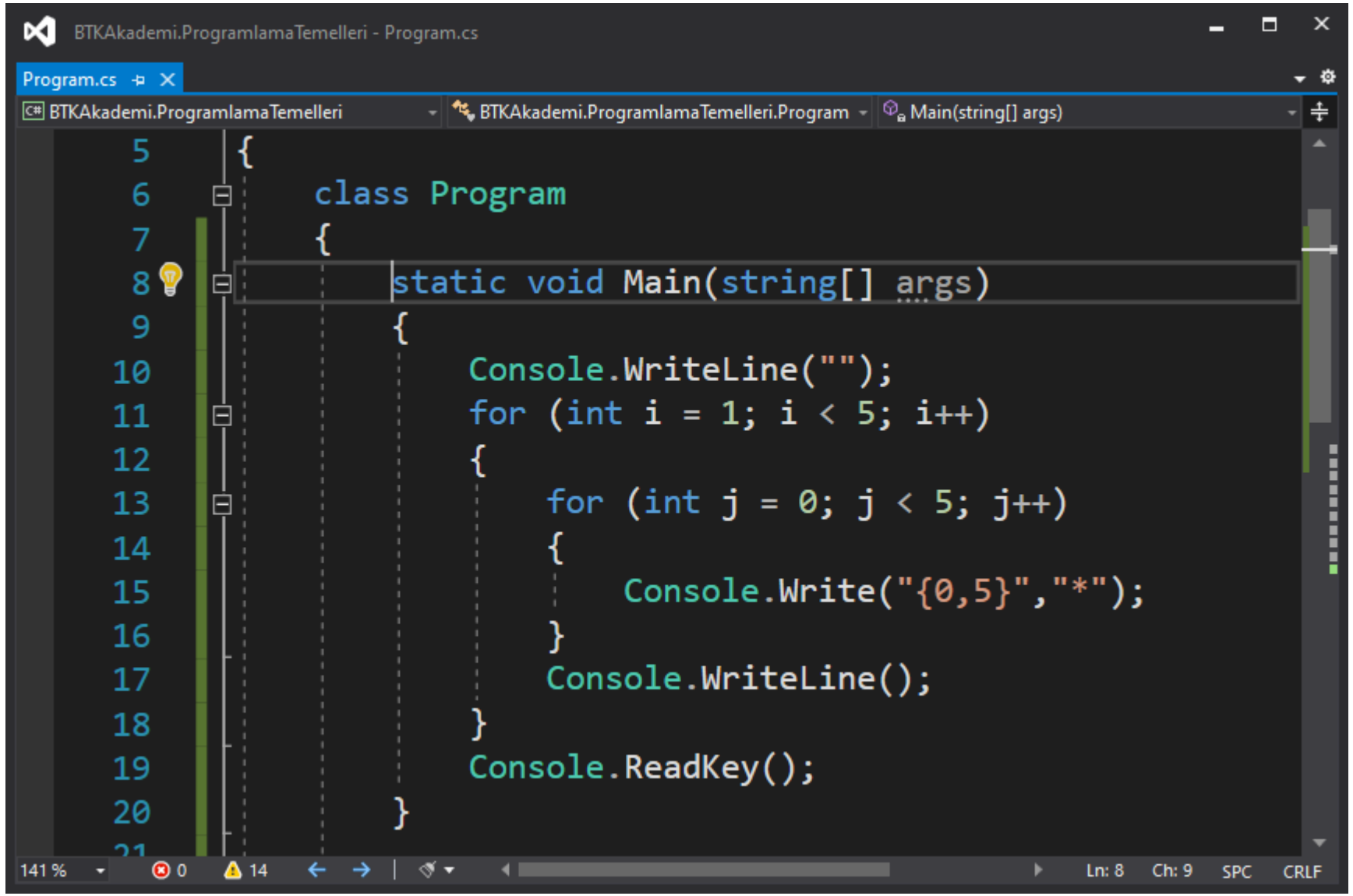
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
switchCaseveEnum()
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 10; i > 0; i--)
{
Console.WriteLine("{0,5} {1,5}",
i,i*i);
}
Console.ReadKey();
}
141 %
0
14
Ln: 13
Ch: 42
SPC
CRLF

# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\...
* * * * *
* * * * *
* * * * *
* * * * *

# for döngüsü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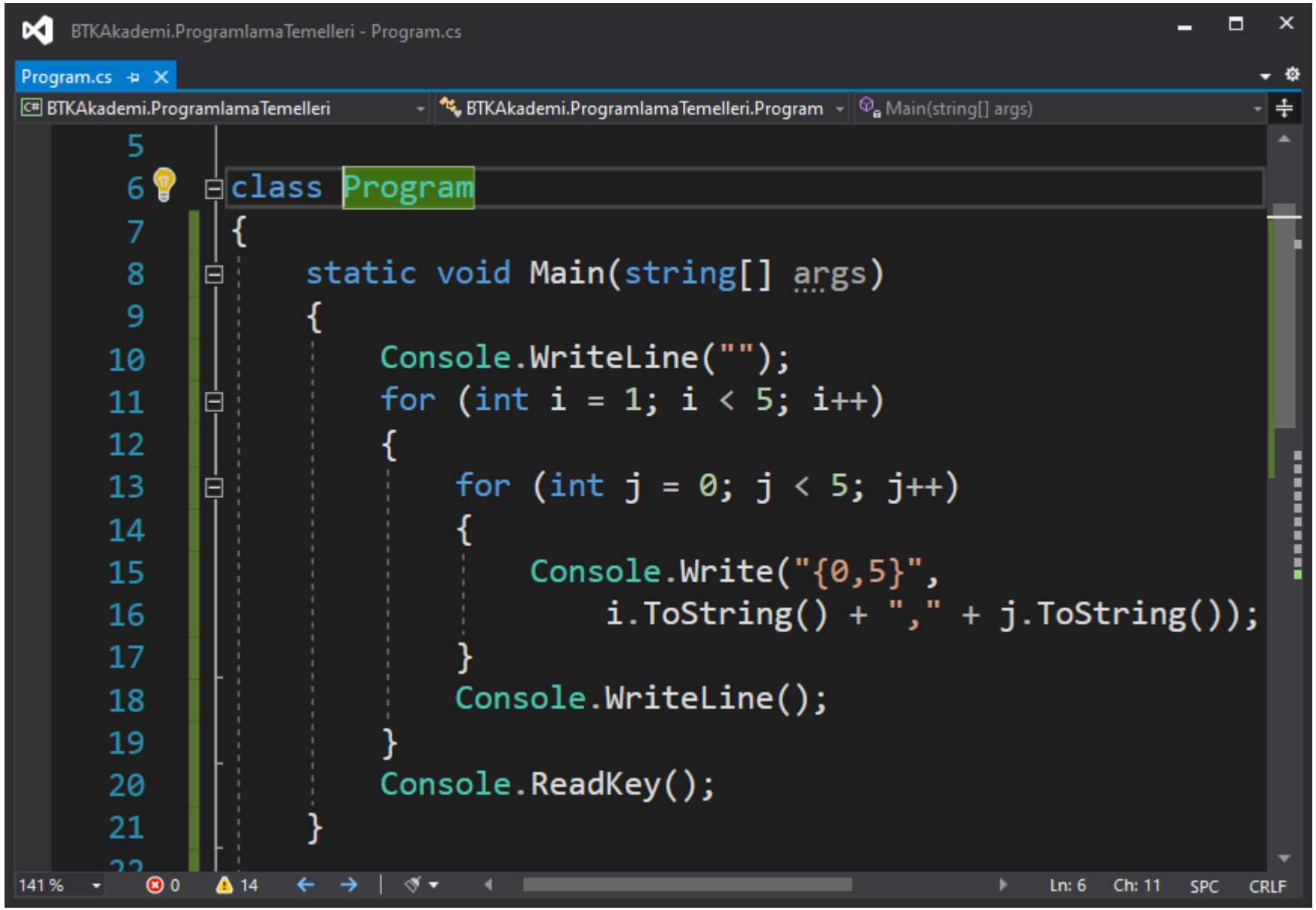
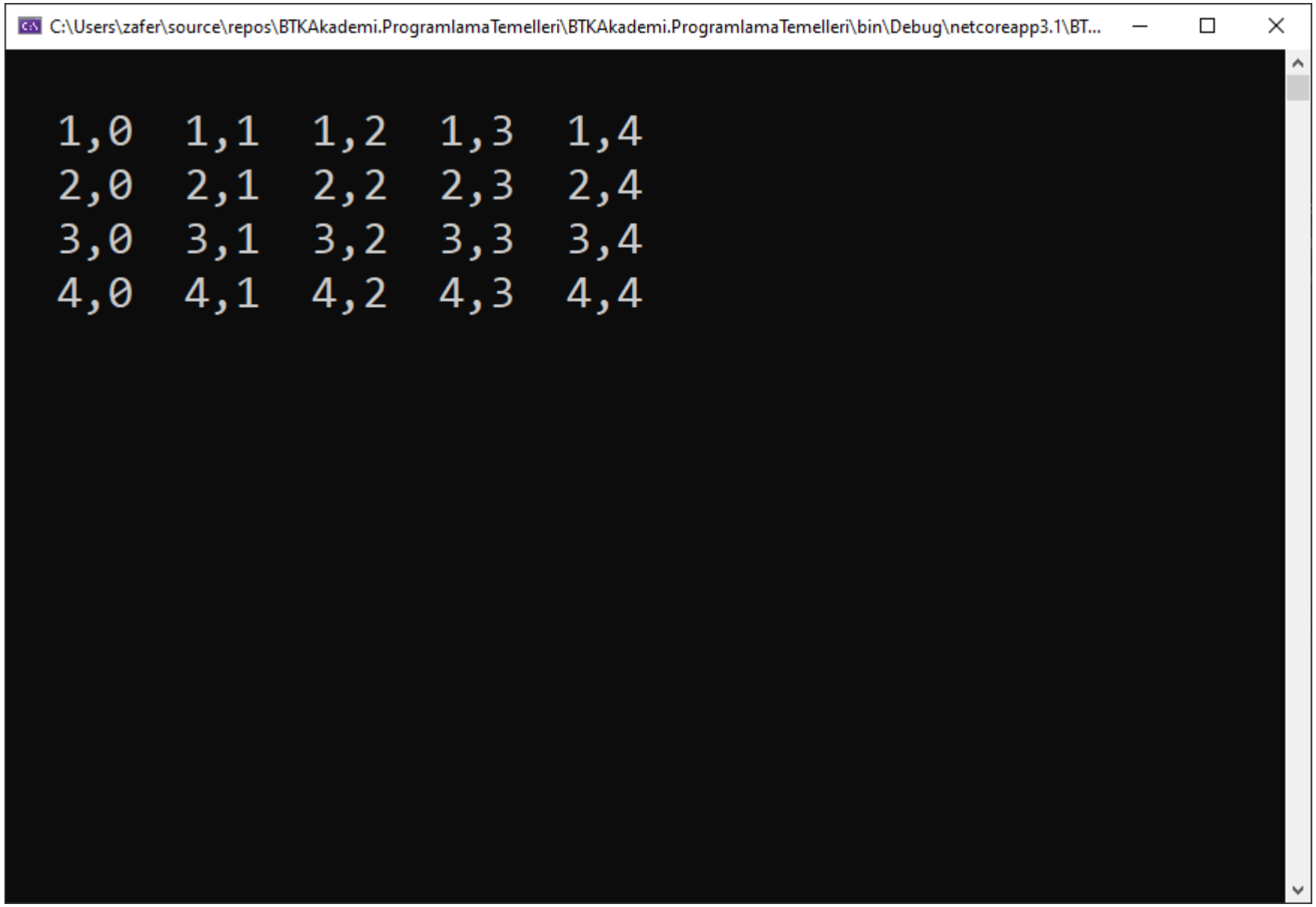
BTKAkademi.ProgramlamaTemelleri.Program
Main(string[] args)
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 1; i < 5; i++)
{
for (int j = 0; j < 5; j++)
{
Console.Write("{0,5}","*");
}
Console.WriteLine();
}
Console.ReadKey();
}
141 %
0
14
Ln: 8
Ch: 9
SPC
CRLF

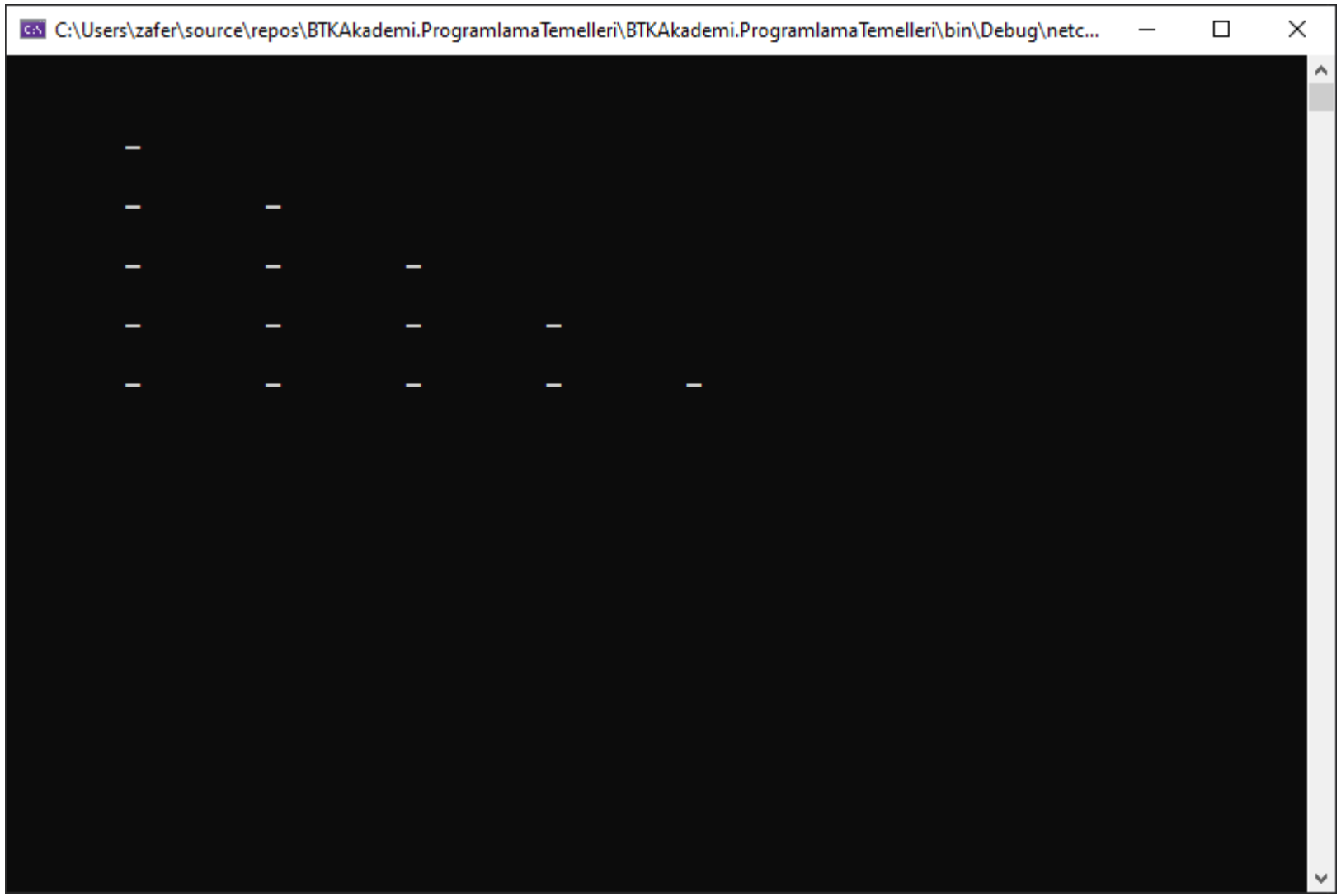
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Program
Main(string[] args)
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 1; i < 5; i++)
{
for (int j = 0; j < 5; j++)
{
Console.Write("{0,5}",
i.ToString() + "," + j.ToString());
}
Console.WriteLine();
}
Console.ReadKey();
}
141 %
0
14
Ln: 6
Ch: 11
SPC
CRLF

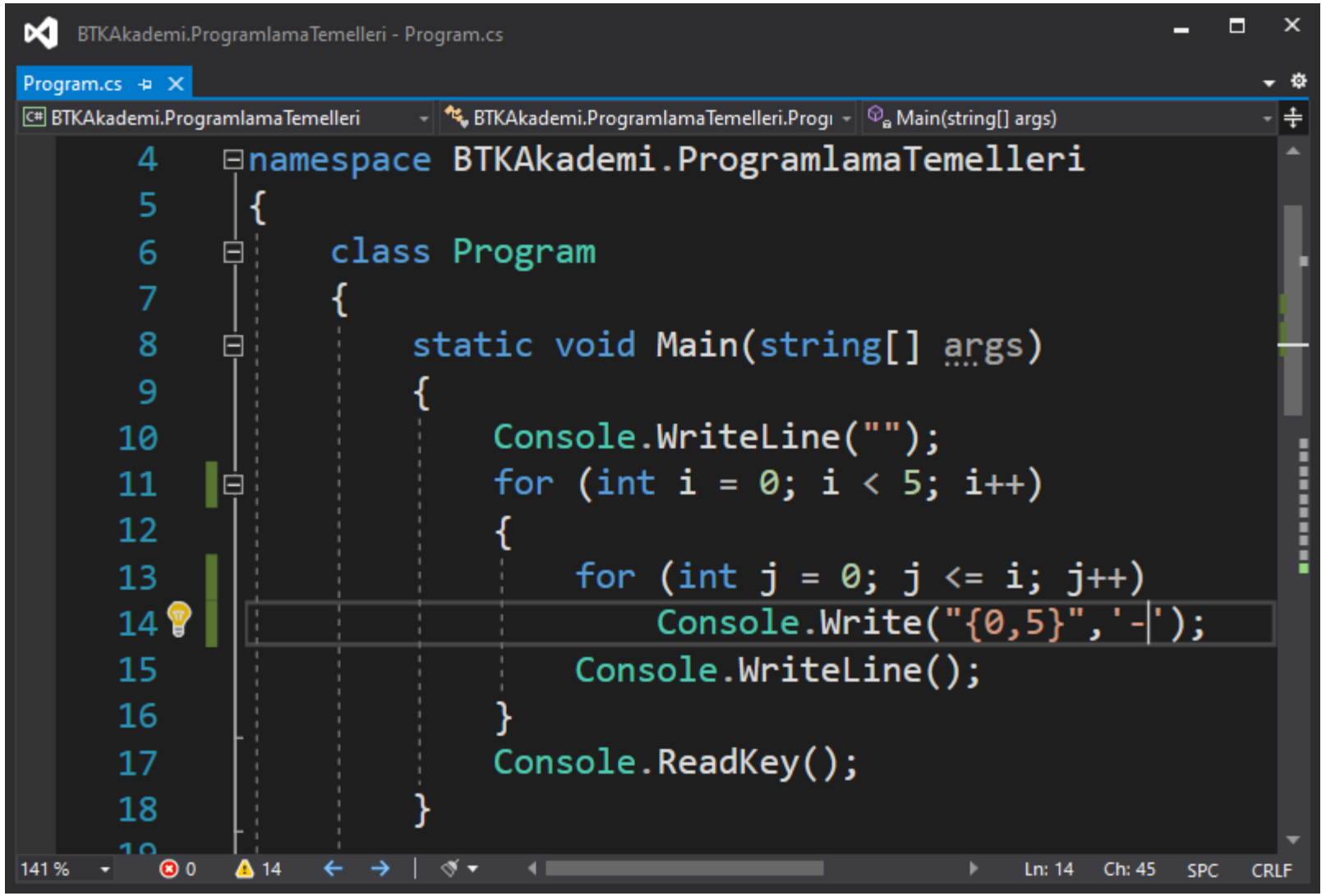
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netcoreapp3.1\BT...
1,0 1,1 1,2 1,3 1,4
2,0 2,1 2,2 2,3 2,4
3,0 3,1 3,2 3,3 3,4
4,0 4,1 4,2 4,3 4,4

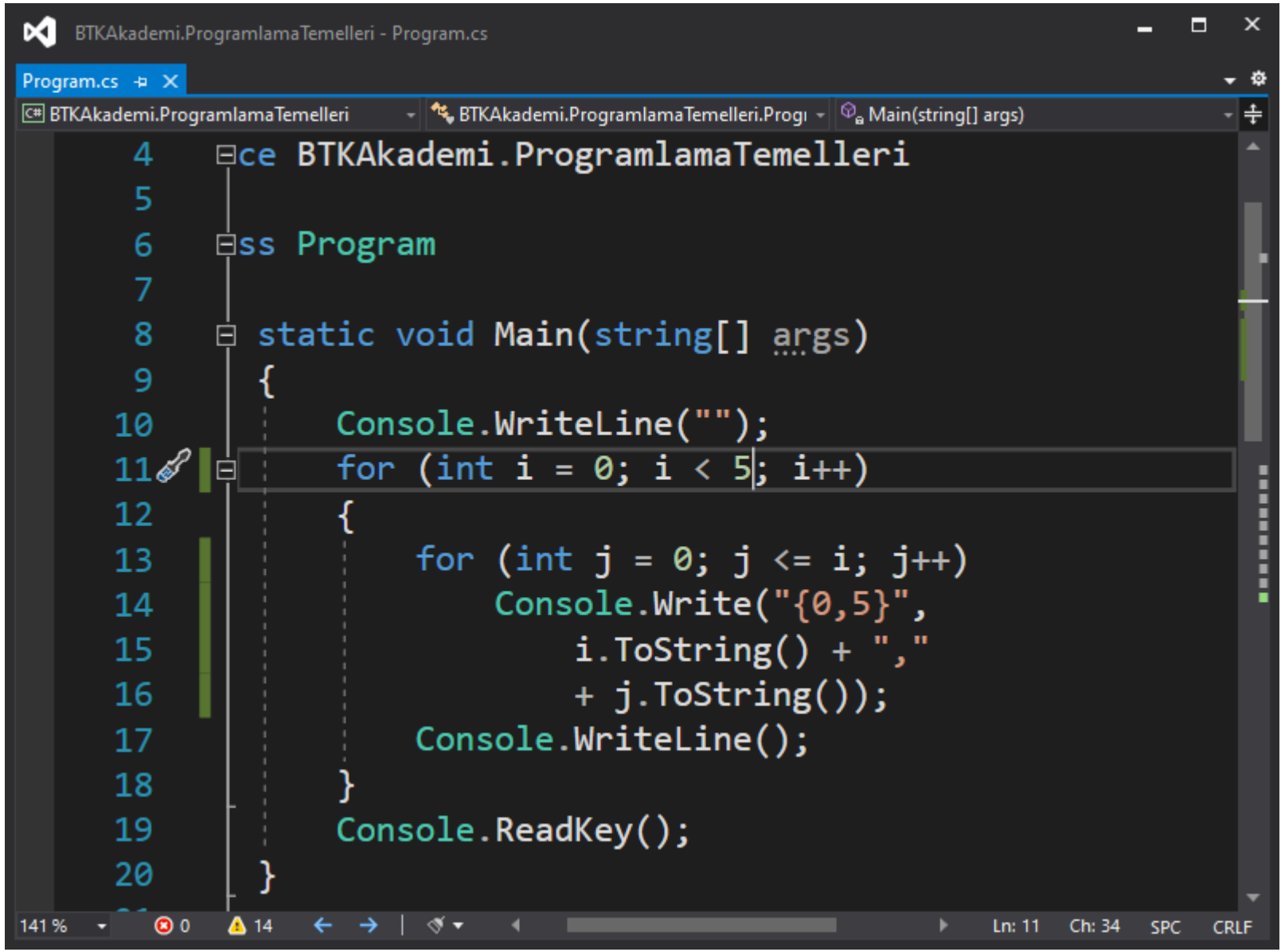
# for döngüsü ?


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netc...

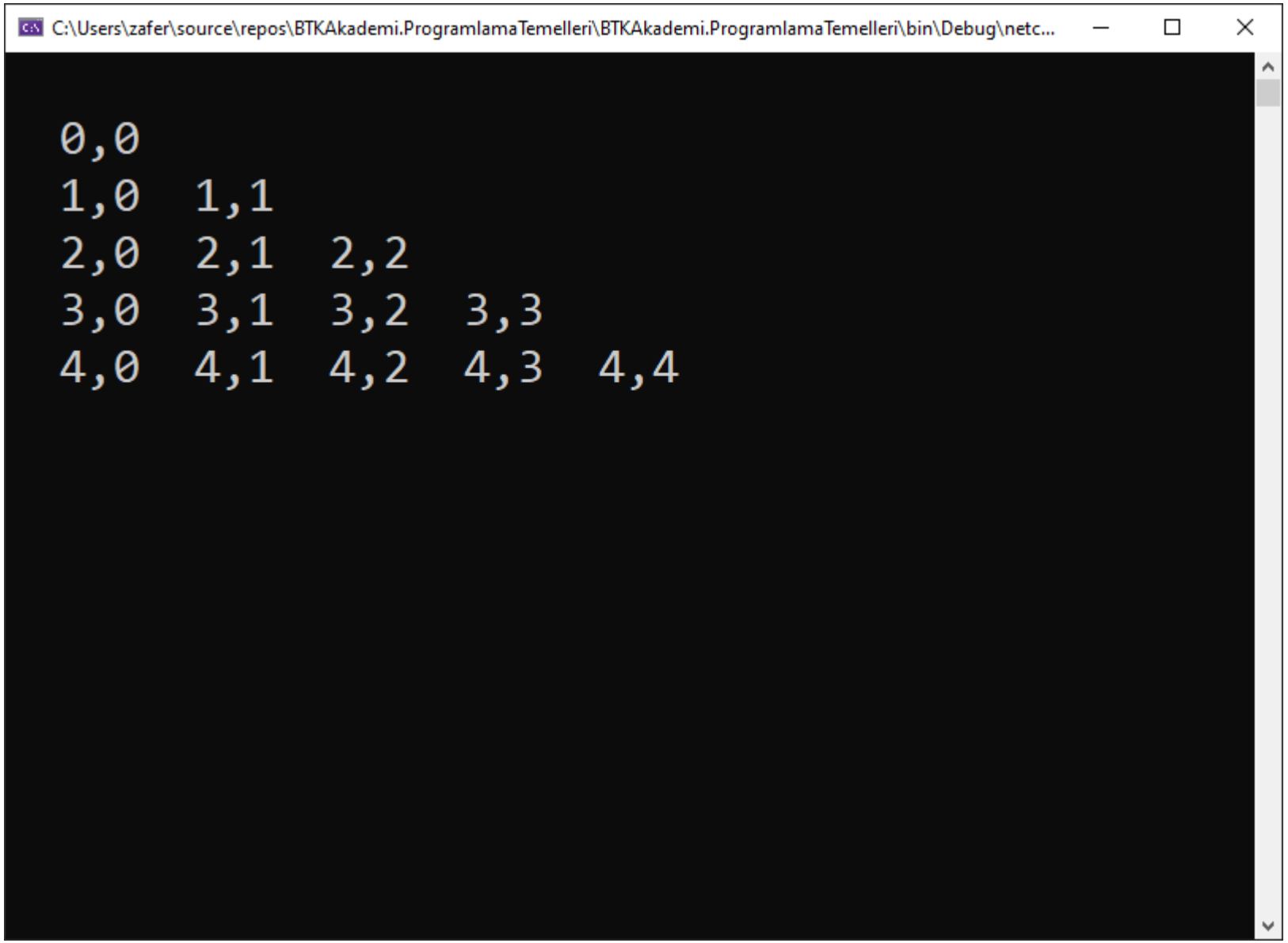
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Progı
Main(string[] args)
namespace BTKAkademi.ProgramlamaTemelleri
{
class Program
{
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 0; i < 5; i++)
{
for (int j = 0; j <= i; j++)
Console.Write("{0,5}",'-');
Console.WriteLine();
}
Console.ReadKey();
}
141 %
0
14
Ln: 14
Ch: 45
SPC
CRLF

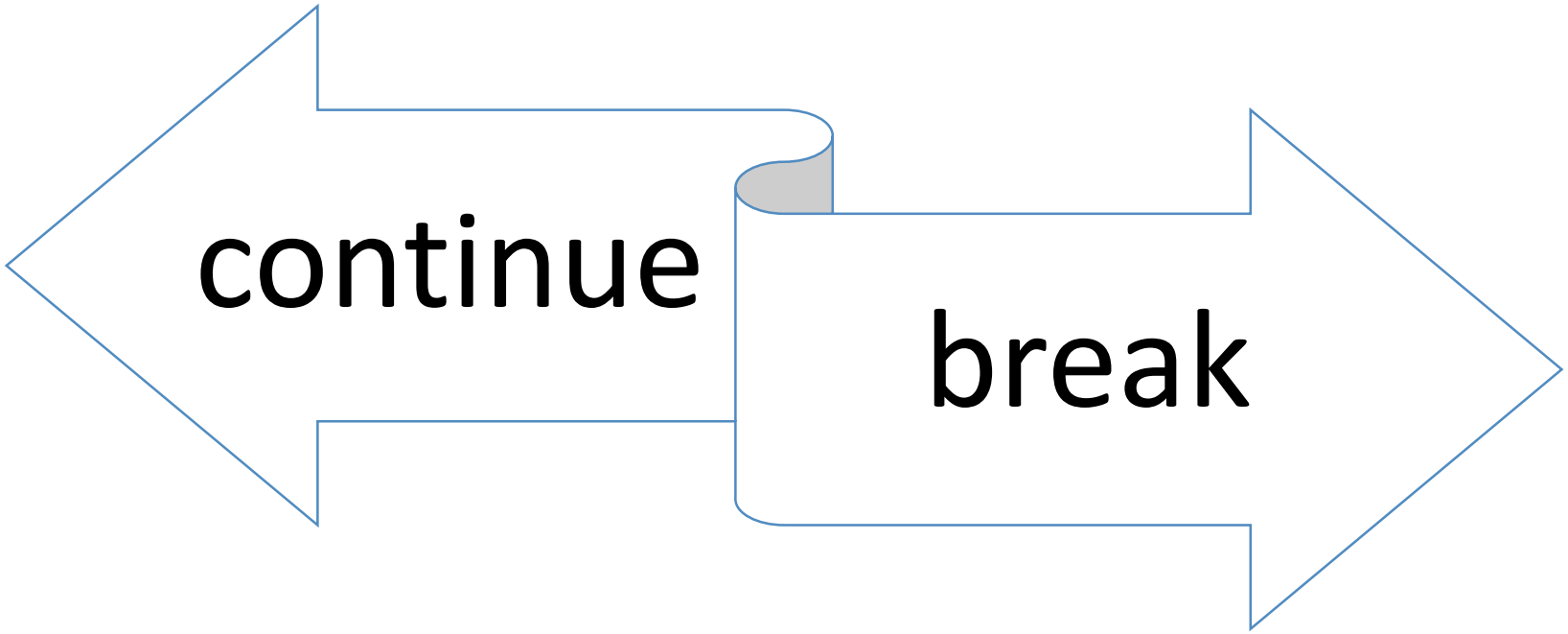
# for döngüsü


BTKAkademi.ProgramlamaTemelleri - Program.cs
Program.cs
BTKAkademi.ProgramlamaTemelleri
BTKAkademi.ProgramlamaTemelleri.Progı
Main(string[] args)
ce BTKAkademi.ProgramlamaTemelleri
ss Program
static void Main(string[] args)
{
Console.WriteLine("");
for (int i = 0; i < 5; i++)
{
for (int j = 0; j <= i; j++)
Console.Write("{0,5}",
i.ToString() + ","
+ j.ToString());
Console.WriteLine();
}
Console.ReadKey();
}
141 %
0
14
Ln: 11
Ch: 34
SPC
CRLF

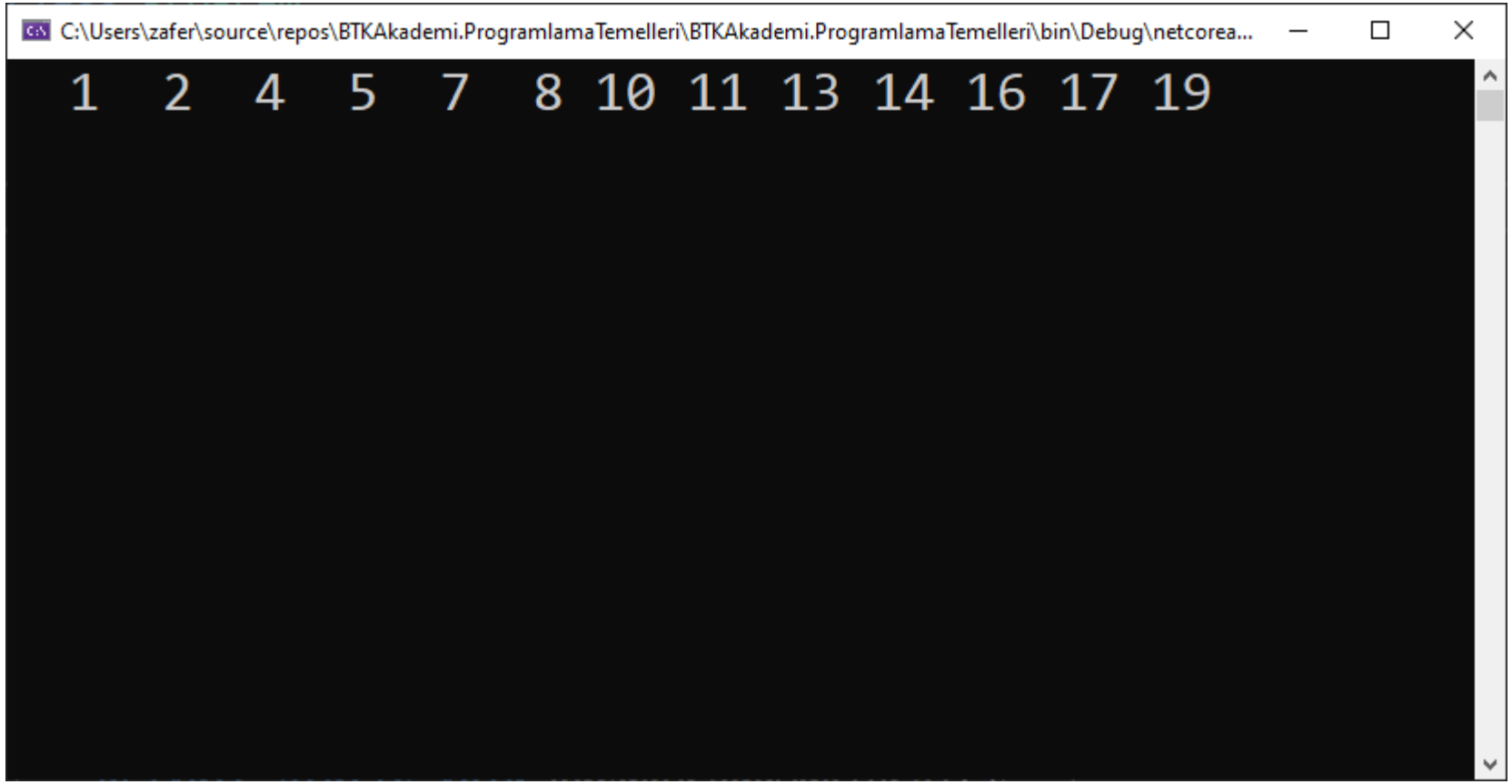
# for döngüsü


C:\Users\zafer\source\repos\BTKAkademi.ProgramlamaTemelleri\BTKAkademi.ProgramlamaTemelleri\bin\Debug\netc...
0,0
1,0 1,1
2,0 2,1 2,2
3,0 3,1 3,2 3,3
4,0 4,1 4,2 4,3 4,4

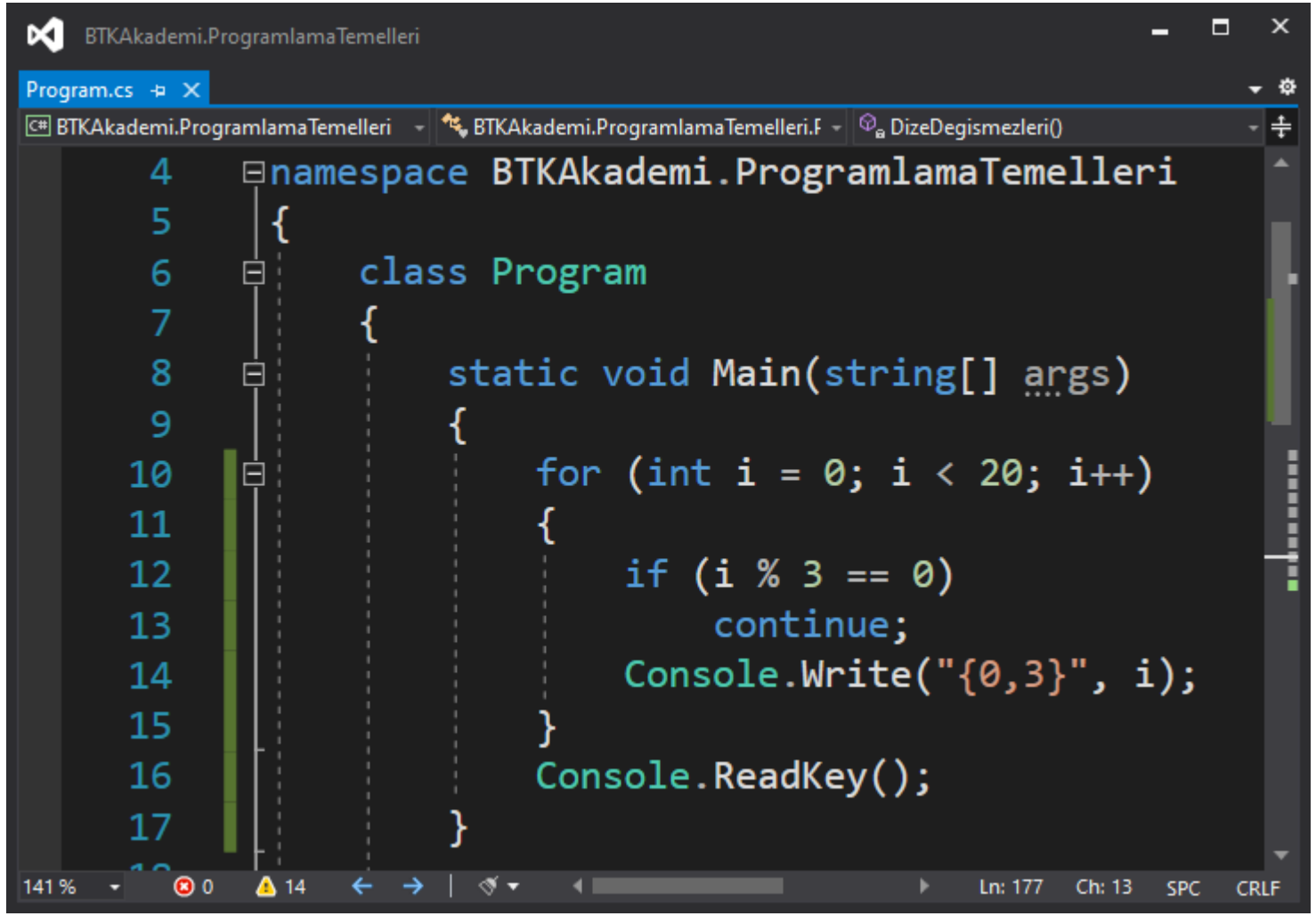
# Döngü kontrol ifadeleri



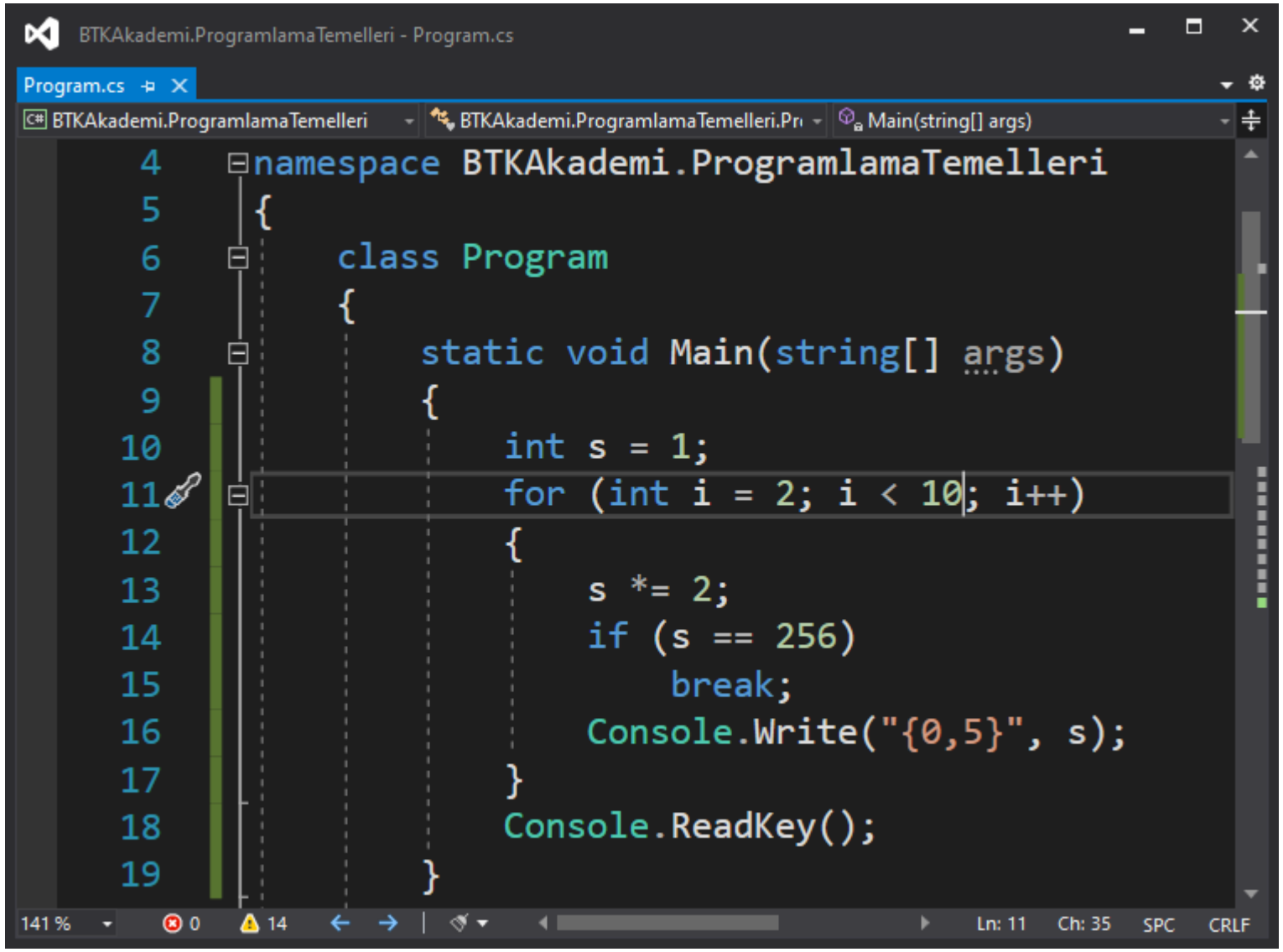
# Döngü kontrol ifadeleri (?)



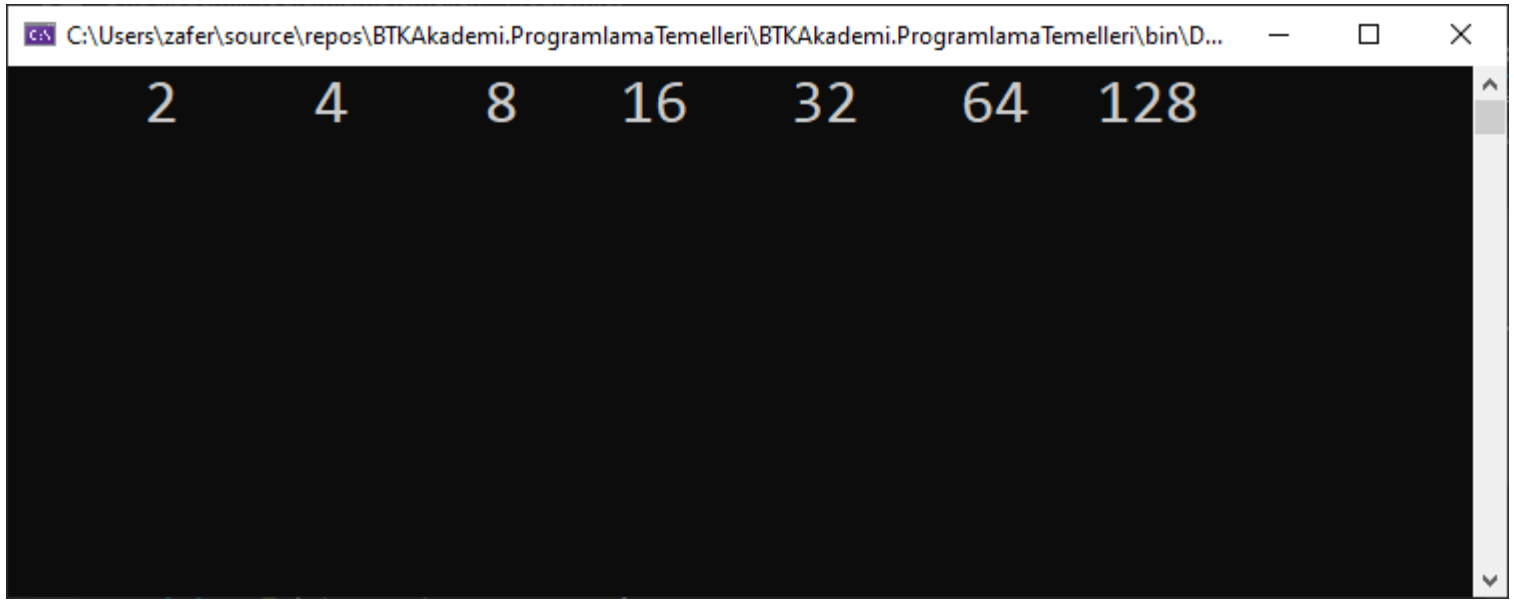
# Döngü kontrol ifadeleri



# Döngü kontrol ifadeleri



# Döngü kontrol ifadeleri

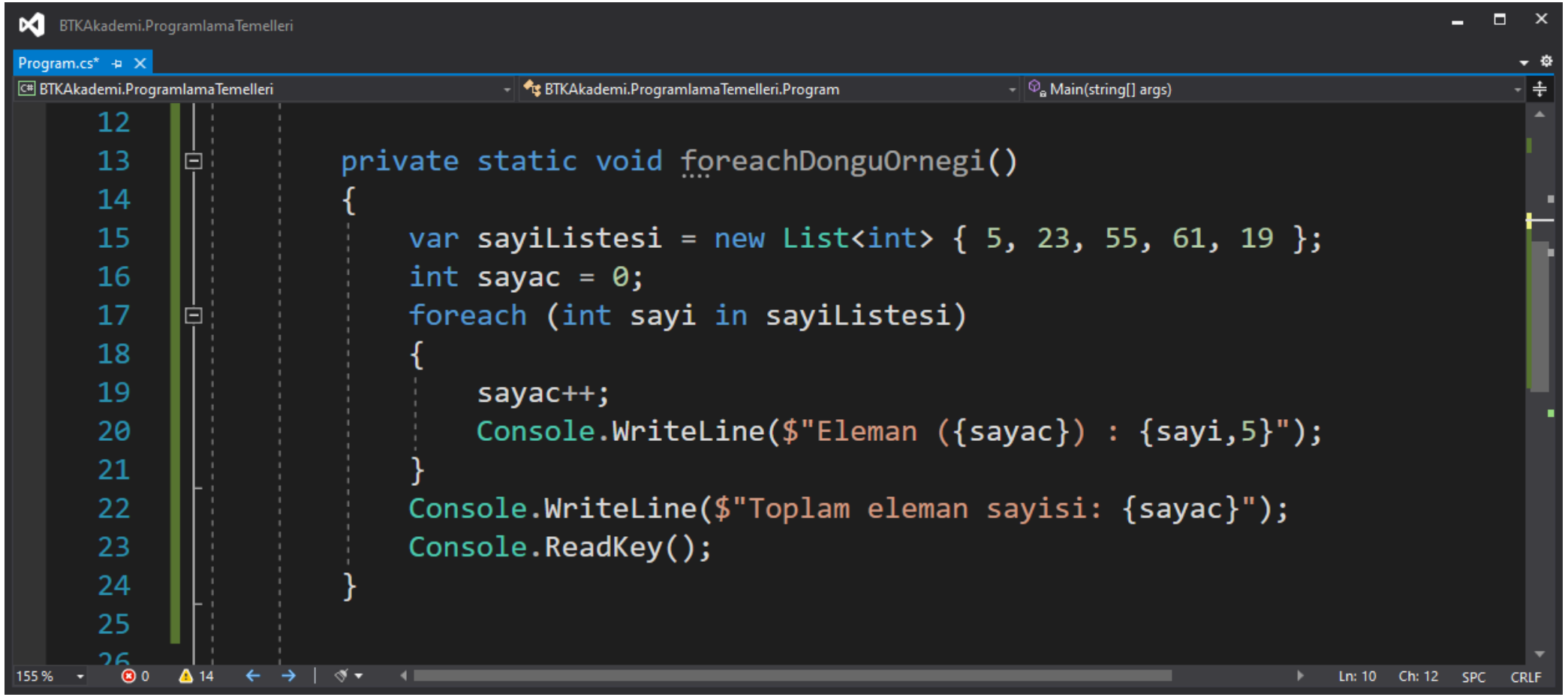


# `foreach` Döngüsü

C# Kopyala

```
foreach (var item in collection) { }
```

# foreach Döngüsü

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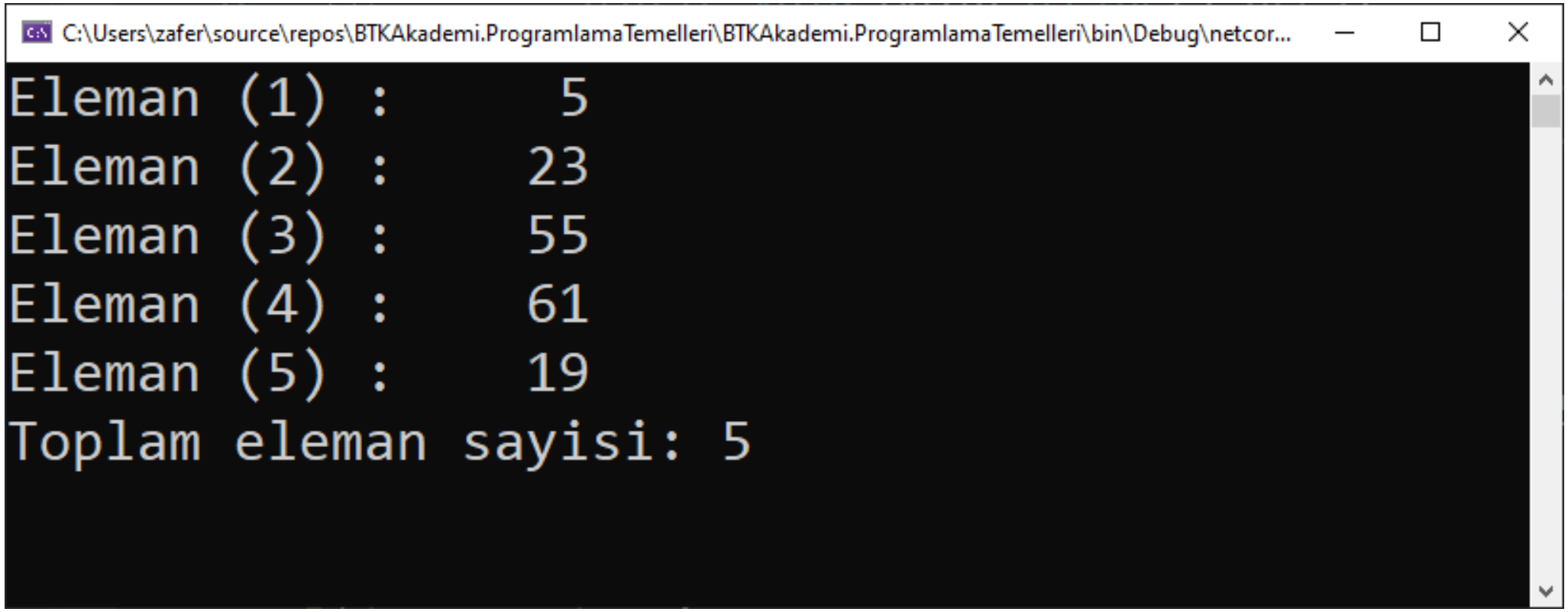
# `foreach` Döngüsü

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## Çevrimler (Döngüler)

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